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USAF BIOENVIRONMENTAL NOISE DATA HANDBOOK, VOLUME 125. F-105D A--ETC(U)  
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MICROCOPY RESOLUTION TEST CHART  
NATIONAL BUREAU OF STANDARDS-1963-A

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AMRL-TR-75-50  
Volume 125



**USAF BIOENVIRONMENTAL NOISE  
DATA HANDBOOK  
Volume 125  
F-105D Aircraft, Near and Far-Field Noise**

**LEVEL** *III*

October 1978

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WRIGHT-PATTERSON AIR FORCE BASE, OHIO 45433

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This technical report has been reviewed and is approved for publication.

FOR THE COMMANDER



HENNING E. VON GERNER  
Director

• Biodynamics and Biomechanics Division  
Aerospace Medical Research Laboratory

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→ The USAF F-105D is a multipurpose, adverse weather fighter-bomber aircraft powered by a J75-P-19W turbojet engine. This report provides measured and extrapolated data defining the bio-acoustic environments produced by this aircraft operating on a concrete runup pad for five engine-power conditions. Near-field data are reported for eight locations in a wide variety of physical and psychoacoustic measures: overall and band sound →		

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pressure levels, C-weighted and A-weighted sound levels, preferred speech interference level, perceived noise levels, and limiting times for total daily exposure of personnel with and without standard Air Force ear protectors. Far-field data measured at 19 locations are normalized to standard meteorological conditions and extrapolated from 75-8000 meters to derive sets of equal-value contours for these same seven acoustic measures as functions of angle and distance from the source. Refer to Volume 1 of this handbook, "USAF Bioenvironmental Noise Data Handbook, Vol 1: Organization, Content and Application", AMRL-TR-75-50(1) 1975, for discussion of the objective and design of the handbook, the types of data presented, measurement procedures, instrumentation, data processing, definitions of quantities, symbols, equations, applications, limitations, etc.

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## PREFACE

This report was prepared by the Biodynamic Environment Branch, Aerospace Medical Research Laboratory, under Project/Task 723107, Technology to Define and Assess Environmental Quality of Noise, from Air Force Operations. The author gratefully acknowledges Mr. John Cole for his assistance in preparing this report, Mr. Harald Hille for his assistance in acquiring the raw data, Mr. Henry Mohlman, Mr. Keith Kettler and Mr. Fred Lampley of the University of Dayton for assistance in the mechanics of data processing and Mrs. Peggy Massie for typing and assistance in preparation of graphics.

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## INTRODUCTION

The USAF F-105D is a multipurpose, adverse weather fighter-bomber aircraft powered by a J75-P-19W turbojet engine. The aircraft was manufactured by the Republic Aviation Corporation and the engine by United Aircraft, Pratt and Whitney Division.

This volume provides measured and extrapolated data defining bioacoustic environments produced by this aircraft during ground runup operations. Such data are essential to evaluate ear protection requirements, limiting personnel exposure times, voice communication capabilities, and annoyance problems associated with ground runups of the F-105D aircraft.

This volume is one of a series published by the Aerospace Medical Research Laboratory (AMRL) under the same report number (AMRL-TR-75-50) as a multi-volume handbook that quantifies the noise environments produced at flight/ground crew locations and in surrounding communities by operations of Air Force aircraft and ground support equipment. The far-field, community-type noise data in the handbook describe the noise produced during *ground operations* of aircraft, ground support equipment, and other ground-based equipment or facilities.

Volume 1 of this handbook discusses the objectives and design of the handbook, types of data presented, measurement procedures, instrumentation, data processing, definitions of quantities, symbols, equations, applications, limitations, etc. Volume 2 provides a method and data for adjusting the handbook's far-field noise data, which are for standard meteorological conditions (15 C temperature, 70% rel humidity, 0.760 meters Hg barometric pressure), to derive comparable data for other meteorological conditions. *Refer to Volumes 1 and 2* (references 1 and 2) for such information because it is not repeated in other handbook volumes.

A cumulative index lists those aerospace systems contained in the handbook, and identifies the specific volumes containing each type of environmental noise data available (i.e., inflight/flight crew and passenger noise, near-field ground crew noise, far-field/community noise). Volume numbers are assigned sequentially as individual volumes are published. This index is periodically updated as individual volumes are published and is available upon request from AMRL/BBE, Wright-Patterson AFB, OH 45433. Organizations on the distribution list for the handbook will automatically receive a copy of each updated index.

Direct any questions concerning the technical data in this report and other handbook volumes to: AMRL/BBE, Wright-Patterson AFB, OH 45433; AUTOVON 78-53675 or 78-53664; Commercial (513) 255-3675 or (513) 255-3664.

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1. Cole, John N., *USAF Bioenvironmental Noise Data Handbook, Volume 1: Organization, Content and Application*, AMRL-TR-75-50 (1), Aerospace Medical Research Laboratory, Wright-Patterson Air Force Base, Ohio, 1975
  2. Cole, John N., *USAF Bioenvironmental Noise Data Handbook Volume 2: Procedure to Evaluate Effects of Non-standard Meteorological Conditions on Far-Field Noise*, AMRL-TR-75-50 (2), AMRL, WPAFB, OH, 1975

## NEAR-FIELD NOISE

### MEASUREMENTS

AMRL acquired near-field noise data on the F-105D aircraft during ground runup operations of its turbojet engine. For these tests, the aircraft was located on a concrete apron at Carswell AFB TX. Table 1 gives the surface meteorological conditions and the engine power conditions. The ground-crew chief selected power conditions and near-field locations generally used during routine maintenance or engine runup for preflight checks.

At each near-field location a test engineer randomly moved a hand-held microphone in and around each location, probing all areas where a crew member's head would normally be located. He recorded all of the noise samples on magnetic tape. During analysis of each sample, he determined the root-mean square sound pressure using a 4- or 8-second integration time to derive a power-averaged level for each location.

Figure 1 shows the eight numbered near-field locations where ground crews are usually located for maintenance and/or preflight checkout operations. Estimates of noise levels at other locations in the near-field are difficult since the noise source is spatially distributed, i.e., not a point source. The noise levels at near-field locations can vary widely depending upon relative distances from each noise source (intake noise, exhaust noise, panel resonances, internal engine noise through the engine wall, etc.).

Table 1 lists the numeric/alphabetic designators used on the data pages in this report to identify the measurement locations and test conditions. For example, the designator 1/A means ground crew location 1 and test conditions A.

### RESULTS

The measured data presented in Table 2 define the sound pressure levels (SPL) produced by the F-105D aircraft at the eight ground crew locations. This table includes the overall, 1/3 octave band, and octave band levels. From these data one can calculate the variety of measures given in Table 3 which are widely used to assess the effects of noise on personnel and their performance.

All near-field data are for the meteorological conditions at the time of test but are valid for all typical airbase meteorology because of the short sound propagation distances involved.

**TABLE 1**

**MEASUREMENT LOCATIONS AND TEST CONDITIONS  
FOR NEAR-FIELD NOISE MEASUREMENTS**

**F-105D Aircraft, Ground Runups, Carswell AFB TX  
13 June 1978  
Tail # 600513**

***Ground Crew Location***

<b>1</b>	<b>Wheel Chocks</b>
<b>2</b>	<b>Marshal</b>
<b>3</b>	<b>Pin Pull FLG</b>
<b>4</b>	<b>Trim Adjustment</b>
<b>5</b>	<b>Hot-Streak Observation</b>
<b>6</b>	<b>Engine Eyelet Observation</b>
<b>7</b>	<b>Telephone Talker</b>
<b>8</b>	<b>Telephone Talker</b>

***Aircraft Engine Operation***

<b>A</b>	<b>Idle</b>
<b>B</b>	<b>80% RPM</b>
<b>C</b>	<b>90% RPM</b>
<b>D</b>	<b>Military Power</b>

***Meteorology***

<b>Temperature</b>	<b>23.9 C</b>
<b>Bar Pressure</b>	<b>0.768 M Hg</b>
<b>Rel Humidity</b>	<b>44 %</b>
<b>Wind — Speed</b>	<b>2.6 M/Sec (5 Kts)</b>
<b>— Direction</b>	<b>030 Deg.</b>

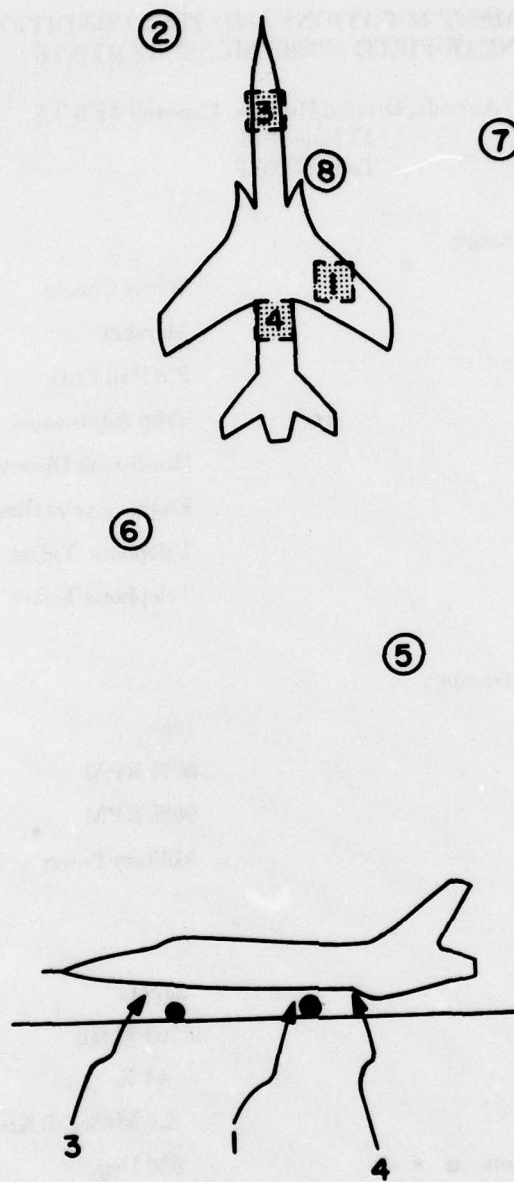


Figure 1. Near-Field Measurement Locations on a Concrete Apron at Carswell AFB TX

## FAR-FIELD NOISE

### MEASUREMENTS

AMRL acquired far-field data during a one hour test period, thus keeping similar meteorological conditions throughout the test. Figure 2 shows the ground runup pad, aircraft orientation and the 19 microphone measurement sites on a semicircle. The center of the 75 meter radius semicircle used in surveying the J75-P-19W engine was on the ground directly below the intersection of the aircraft's centerline and the plane passing through the engine's exhaust-nozzle exit. The ground runup area did not have a blast deflector; therefore, the engine's exhaust was in a "free-flow" condition.

Table 4 provides cockpit readouts of some engine characteristics (Engine Pressure Ratio, fuel flow, etc.) for each power setting used in the far-field tests. Also listed in this table are the surface meteorological conditions during data acquisition.

All microphone measurement sites are in the acoustic far-field of the source where the sound wavefronts spherically diverge and the noise source may be regarded as a point source.

A portable microphone/tape-recorder system was used to sequentially record the noise at each far-field location. The microphone was attached to a hand-held pole, pointed at the source ( $0^\circ$  angle of incidence) and vertically scanned from 0.5 to 3 meters for a period of 5-10 seconds during data acquisition at each microphone location. These samples were then time-integrated to derive a root-mean-square sound pressure level. Vertical scanning and time-integrating together reduce anomalies frequently present in data acquired by a fixed height microphone.

### RESULTS

Table 5 lists the overall and 1/3 octave band SPL measured at the far-field locations under meteorological conditions at the time of the test. Data in all other figures and tables are based on these levels. These data were normalized to 100 meters distance and standard meteorological conditions (15 C temperature, 70% relative humidity, 0.760 meter Hg barometric pressure) and used to derive the graphic data in Figure 3 which provides a compact summary of the far-field noise characteristics of the F-105D aircraft in a standard format.

Figure 4 and Table 6 present two basic acoustic measures, the acoustic power level and the directivity index, respectively. The acoustic power level describes the power radiated by the source as a function of frequency. The directivity index is a standard acoustical engineering measure which describes the geometric way in which the source radiates this power as a function of both frequency and angle from source. These basic source measures are primarily of interest for acoustical engineers and noise generation/control specialists.

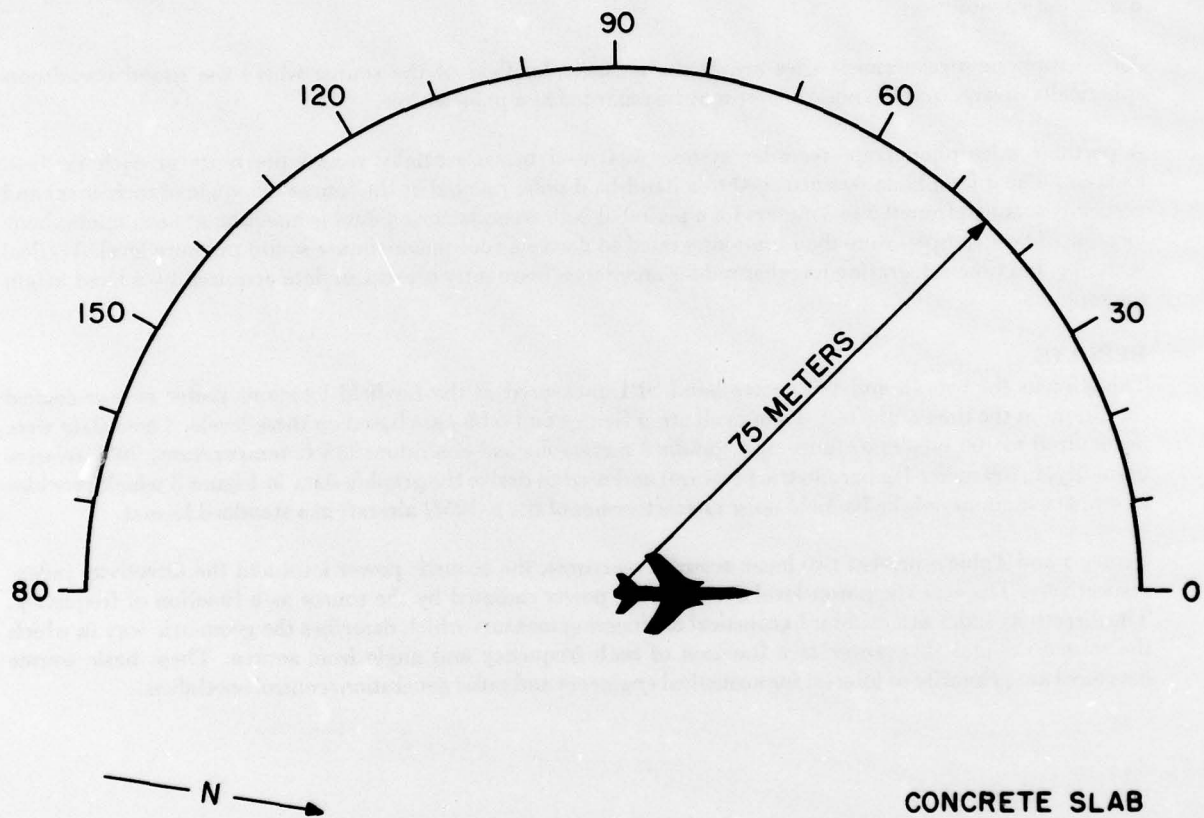


Figure 2. Far-Field Measurement Locations on Concrete Apron at Carswell AFB TX

Estimates of noise characteristics for intermediate power settings (e.g., 88% engine) can be determined as explained in Volume 1 of this handbook.

Figures 5 through 11 are sets of equal noise contours describing seven different measures of noise as a function of angle and distance from the source for standard day meteorology. They are respectively, overall sound pressure level, C-weighted sound level, A-weighted sound level, perceived noise level, speech interference level, permissible exposure times for personnel and octave band sound pressure levels.

Except for the idle power condition no data are presented at the 170 and 180 degree locations because of turbulent air flow behind the aircraft. Typical A-weighted levels for these angles are 10 to 20 dBA below those at the 160 degree location.

Test personnel performed noise surveys during quiet periods when the background noise was minimal, e.g., early in the morning when no other aircraft or engine test stands were operating. Data eliminated because they were near the background/electronic noise were generally not significant because the levels were so low (e.g., Table 5 at idle power).

Volume 2 of the handbook describes the influence of meteorology on far-field noise environments, and provides, if required, the factors necessary to adjust the handbook's standard meteorological day data.

TABLE: MEASURED SOUND PRESSURE LEVEL (DB)												
1/3 OCTAVE BAND												
2												
NOISE SOURCE/SUBJECT: ( OPERATION: )												
F-1050 AIRCRAFT												
GROUND CREW												
NEAR FIELD NOISE LEVELS ( )												
LOCATION/CONDITION												
FREQ (HZ)	1/A	1/B	1/C	1/D	2/A	2/B	3/A	3/B	4/A	4/B	4/C	4/D
25	83	84	86	92	76	79	82	87	88	85	87	94
31.5	94	87	91	93	85	80	88	89	99	86	91	97
40	88	88	92	97	82	85	84	91	93	90	92	98
50	87	91	94	98	81	86	84	89	89	91	94	98
63	87	94	97	101	82	88	84	93	90	95	100	103
80	92	97	101	105	86	90	86	92	92	98	102	106
100	90	96	101	106	87	92	85	91	94	103	102	107
125	85	94	99	106	85	91	84	94	86	103	102	110
160	86	94	101	107	84	89	87	95	86	96	104	110
200	87	97	103	108	81	90	90	98	90	97	105	112
250	87	97	105	110	82	91	95	100	86	95	105	111
315	89	96	103	110	84	93	97	98	87	96	104	110
400	90	97	103	108	87	91	96	100	92	99	106	110
500	94	97	104	109	94	93	102	102	93	102	109	112
630	94	99	105	110	93	96	102	103	91	99	109	115
800	98	101	106	112	96	99	103	105	94	99	109	117
1000	97	99	104	111	96	97	104	104	95	97	107	116
1250	100	99	103	111	101	100	110	106	99	100	107	114
1600	103	106	105	109	106	106	112	113	101	104	105	113
2000	100	107	106	109	102	109	109	115	100	105	105	112
2500	100	103	108	108	102	106	108	111	98	101	106	111
3150	96	105	110	105	99	107	104	112	93	103	105	109
4000	98	107	105	107	101	108	106	113	94	102	104	108
5000	95	102	104	107	97	102	103	108	92	99	101	107
6300	94	101	103	104	96	101	101	107	91	99	100	105
8000	92	102	102	103	96	101	100	107	95	104	100	105
10000	89	99	99	100	92	98	97	104	86	102	98	102
OVERALL	110	115	110	122	111	116	110	121	109	114	119	125

LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: MEASURED SOUND PRESSURE LEVEL (DB) 1/3 OCTAVE BAND										IDENTIFICATION:	
2										OMEGA 3.2	
NOISE SOURCE/SUBJECT: ( OPERATION: )										TEST 78-013-001	
F-1050 AIRCRAFT										RUN 02	
GROUND CREW										18 JAN 79	
NEAR FIELD NOISE LEVELS (										PAGE F2	
LOCATION/CONDITION											
FREQ (HZ)	5/C	6/A	6/B	6/C	7/A	7/B	7/C	7/D	8/B		
25	104	87	96	106	79	77	82	89	82		
31.5	109	94	100	108	86	82	86	91	87		
40	113	89	103	111	84	84	88	93	89		
50	115	88	103	112	82	87	91	96	88		
63	118	87	104	116	82	88	93	99	90		
80	121	89	105	118	82	88	94	100	92		
100	124	89	104	118	85	91	97	101	92		
125	123	89	102	117	83	92	97	102	93		
160	121	88	100	115	85	91	98	103	90		
200	117	83	100	113	80	91	98	105	93		
250	115	84	102	116	78	91	98	105	92		
315	112	92	106	119	79	94	99	106	94		
400	112	93	107	121	83	91	97	103	94		
500	112	93	105	119	89	91	97	103	94		
630	113	87	101	117	90	93	98	103	97		
800	113	86	102	117	90	93	101	107	97		
1000	109	87	99	116	88	93	101	109	97		
1250	106	87	97	114	97	91	100	110	97		
1600	105	89	96	112	96	98	99	106	103		
2000	103	88	95	110	92	99	99	105	105		
2500	101	88	93	109	91	95	101	104	102		
3150	98	86	92	106	89	97	100	102	103		
4000	96	97	92	104	90	98	97	102	104		
5000	94	90	91	103	87	93	96	100	99		
6300	92	89	90	101	86	93	95	98	100		
8000	92	92	90	101	87	94	95	98	100		
10000	89	92	88	98	84	93	93	96	98		
OVERALL	130	104	116	129	103	108	112	118	113		

LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: MEASURED SOUND PRESSURE LEVEL (DB)												
OCTAVE BAND												
2												
NOISE SOURCE/SUBJECT: ( OPERATION: )												
F-105D AIRCRAFT ( )												
GROUND CREW ( )												
NEAR FIELD NOISE LEVELS ( )												
LOCATION/CONDITION												
FREQ (HZ)	1/A	1/B	1/C	1/D	2/A	2/B	3/A	3/B	4/A	4/B	4/C	4/D
31.5	95	91	95	99	87	87	91	94	100	92	95	101
63	94	99	103	107	88	93	89	96	95	100	104	108
125	92	100	105	111	90	95	90	99	95	105	108	114
250	92	102	109	114	87	96	100	103	93	101	109	116
500	98	102	109	114	97	98	106	107	97	105	113	118
1000	103	104	109	116	103	104	112	110	102	104	113	121
2000	106	110	111	113	109	112	115	118	105	108	110	117
4000	101	110	112	111	104	111	109	116	98	106	108	113
8000	97	106	106	107	100	105	104	111	97	107	104	109
OVERALL	110	115	118	122	111	116	118	121	109	114	119	125
IDENTIFICATIONS:												
OMEGA 3.2												
TEST 76-013-001												
RUN 01												
18 JAN 79												
PAGE J1												

TABLE: MEASURED SOUND PRESSURE LEVEL (dB)										IDENTIFICATION:	
2											
NOISE SOURCE/SUBJECT:										OMEGA 3.2	
( OPERATION:										TEST 79-013-001	
F-105D AIRCRAFT										RUN 02	
GROUND CREW										18 JAN 79	
NEAR FIELD NOISE LEVELS										PAGE J2	
LOCATION/CONDITION											
5/C 6/A 6/B 6/C 7/A 7/B 7/C 7/D 8/B											
FREQ (HZ)											
31.5	115	96	105	113	89	87	91	96	92		
63	124	92	109	120	87	93	98	103	95		
125	127	93	107	122	89	96	102	107	96		
250	120	93	108	122	84	97	103	110	98		
500	117	97	110	124	93	96	102	108	100		
1000	115	92	104	121	98	97	105	113	102		
2000	108	93	100	115	98	102	104	110	108		
4000	101	98	96	109	94	101	103	106	107		
6000	96	96	94	105	91	98	99	102	104		
OVERALL	130	104	116	129	103	108	112	118	113		

MEASURES OF HUMAN NOISE EXPOSURE											IDENTIFICATION:
3											OMEGA 3.2
											TEST 78-013-001
NOISE SOURCE/SUBJECT:	(	OPERATION:									RUN 01
F-1050 AIRCRAFT	(										18 JAN 79
GROUND CREW	(										PAGE M1
NEAR FIELD NOISE LEVELS	(										
LOCATION/CONDITION											
1/A	1/B	1/C	1/D	2/A	2/B	3/A	3/B	4/A	4/B	4/C	4/D
HAZARD/PROTECTION											
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DB) AT EAR											
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DB) AT EAR											
MAXIMUM PERMISSIBLE TIME (T IN MINUTES) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)											
NO PROTECTION											
OASLC	109	114	118	122	111	115	118	121	108	114	119
OASLA	110	115	117	120	112	116	118	122	108	113	117
T	5	2.2	P	P	3.8	P	P	P	8	3.2	P
MINIMUM QPL EAR MUFFS											
OASLA*	82	88	92	97	84	88	90	94	82	89	94
T	679	240	120	50	480	240	170	85	679	202	85
AMERICAN OPTICAL 1700 EAR MUFFS											
OASLA*	76	83	87	91	77	82	84	88	77	84	88
T	960	571	285	143	960	679	480	240	960	480	240
V-51R EAR PLUGS											
OASLA*	82	86	90	95	83	86	90	92	80	85	92
T	679	339	170	71	571	339	170	120	960	404	120
AMERICAN OPTICAL 1700 EAR MUFFS PLUS V-51R EAR PLUGS											
OASLA*	68	72	76	81	70	72	77	78	67	72	78
T	960	960	960	807	960	960	960	960	960	960	404
H-133 GROUND COMMUNICATION UNIT											
OASLA*	82	87	91	93	85	89	91	94	81	86	90
T	679	285	143	101	404	202	143	85	807	339	170
COMMUNICATION											
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)											
PSIL	102	106	110	115	103	105	111	111	101	106	112
ANNOUNCE											
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PND8)											
TONE CORRECTION (C IN DB)											
PNLT	123	130	133	133	126	131	131	136	122	128	131
C	1	1	1	0	2	1	1	1	1	1	0

\* BASED ON CALCULATED SPL SPECTRUM UNDER PROTECTIVE DEVICE.  
P ADDITIONAL EAR PROTECTION REQUIRED.

TABLE: MEASURES OF HUMAN NOISE EXPOSURE											IDENTIFICATION:	
3											OMEGA 3.2	
											TEST 78-013-001	
NOISE SOURCE/SUBJECT:											RUN 02	
F-1050 AIRCRAFT											18 JAN 79	
GROUND CREW												
NEAR FIELD NOISE LEVELS											PAGE H2	

\* BASED ON CALCULATED SPL SPECTRUM UNDER PROTECTIVE DEVICE.  
P ADDITIONAL EAR PROTECTION REQUIRED.

**TABLE 4**

**TEST CONDITIONS  
FOR FAR-FIELD NOISE MEASUREMENTS**

**F-105D Aircraft, Ground Runups, Carswell AFB TX  
13 June 1978  
Tail # 600513**

***Aircraft Engine Operation***

**Idle**

**70 % RPM Core Speed  
1.17 Engine Pressure Ratio  
260 C, Exhaust Gas Temperature  
1700 LBS/HR, Fuel Flow**

**80% RPM**

**80 % RPM, NC  
1.30 EPR  
322 C, EGT  
2800 LBS/HR, FF**

**90% RPM**

**90 % RPM, NC  
1.68 EPR  
422 C, EGT  
5550 LBS/HR, FF**

**Military Power**

**102 % RPM, NC  
2.41 EPR  
618 C, EGT  
11,000 LBS/HR, FF**

**Afterburner Power**

**102 % RPM, NC  
2.41 EPR  
620 C, EGT  
11,000 LBS/HR, FF  
(Plus Afterburner)**

***Meteorology***

**Temperature  
Bar Pressure  
Rel Humidity  
Wind — Speed  
— Direction**

**23.9 C  
0.768 M Hg  
44 %  
2.6 M/Sec (5 Kts)  
030 Deg.**



TABLE: MEASURED SOUND PRESSURE LEVEL (DB)																		
1/3 OCTAVE BAND																		
DISTANCE = 75 METERS																		
NOISE SOURCE/SUBJECT:																		
( OPERATION: )																		
( F-1050 AIRCRAFT )																		
( J75-P-19W ENGINE )																		
( FAR FIELD NOISE )																		
( METEOROLOGY: )																		
( TEMP = 24 C )																		
( BAR PRESS = .760 M HG )																		
( REL HUMID = 44 % )																		
( IDENTIFICATION: )																		
( OMEGA 1.4 )																		
( TEST 78-013-001 )																		
( RUN 02 )																		
( 16 SEP 78 )																		
( PAGE 2 )																		
FREQ (HZ)																		
0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180																		
25	67	70	70	70	73	70	70	69	69	70	70	71	72	75	79	80	84	
31.5	71	71	72	72	71	73	71	73	72	73	72	74	75	79	82	86	87	
40	73	73	73	74	73	74	76	73	76	75	76	76	79	83	87	89	91	
50	72	71	72	74	74	75	75	75	76	77	78	81	85	88	90	92		
63	73	72	73	75	76	75	77	76	78	77	79	80	81	86	90	93	94	
80	76	74	75	77	76	78	78	78	79	80	82	82	83	87	90	94	95	
100	77	76	78	79	79	79	80	80	81	82	83	83	85	87	90	95	94	
125	78	77	78	79	79	78	79	79	82	81	83	84	87	89	93	92		
160	78	77	79	79	79	78	80	80	82	82	84	86	88	88	90	90		
200	79	79	79	79	81	80	81	82	82	83	85	85	87	89	90	88	80	
250	81	80	80	81	82	79	81	81	83	82	85	86	88	89	90	88	87	
315	77	79	79	78	80	80	81	82	84	83	86	87	88	89	88	89	84	
400	80	79	79	81	83	81	83	84	85	83	85	87	87	89	87	87	83	
500	80	79	78	80	81	80	83	83	84	83	86	86	86	87	86	85	81	
630	82	80	79	80	80	78	81	80	81	81	84	84	84	86	84	83	79	
800	81	79	80	80	79	78	81	81	81	80	84	83	83	84	82	81	77	
1000	78	77	79	77	77	76	79	78	79	78	81	81	81	82	79	78	73	
1250	80	78	79	78	77	77	79	77	77	77	81	80	79	81	78	76	71	
1600	89	86	87	85	85	84	83	79	78	78	81	81	80	80	77	75	72	
2000	93	89	88	89	86	86	84	80	78	79	80	80	78	79	76	76	73	
2500	87	84	83	82	82	79	79	77	75	76	78	78	77	77	75	71	67	
3150	89	87	87	85	83	82	79	75	74	74	76	76	75	75	72	71	66	
4000	90	88	89	87	86	85	81	77	74	75	75	76	75	75	72	71	68	
5000	85	82	82	81	80	78	76	75	77	75	76	79	77	75	73	71	64	
6300	83	81	81	80	79	77	76	75	76	74	75	80	78	75	72	70	62	
8000	81	80	80	78	77	75	74	72	72	72	73	76	75	73	72	69	61	
10000	76	76	76	74	72	71	67	67	68	68	70	71	70	68	66	63	56	
OVERALL	98	96	96	95	95	94	94	93	94	94	96	96	97	99	100	102	102	
< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.																		

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.



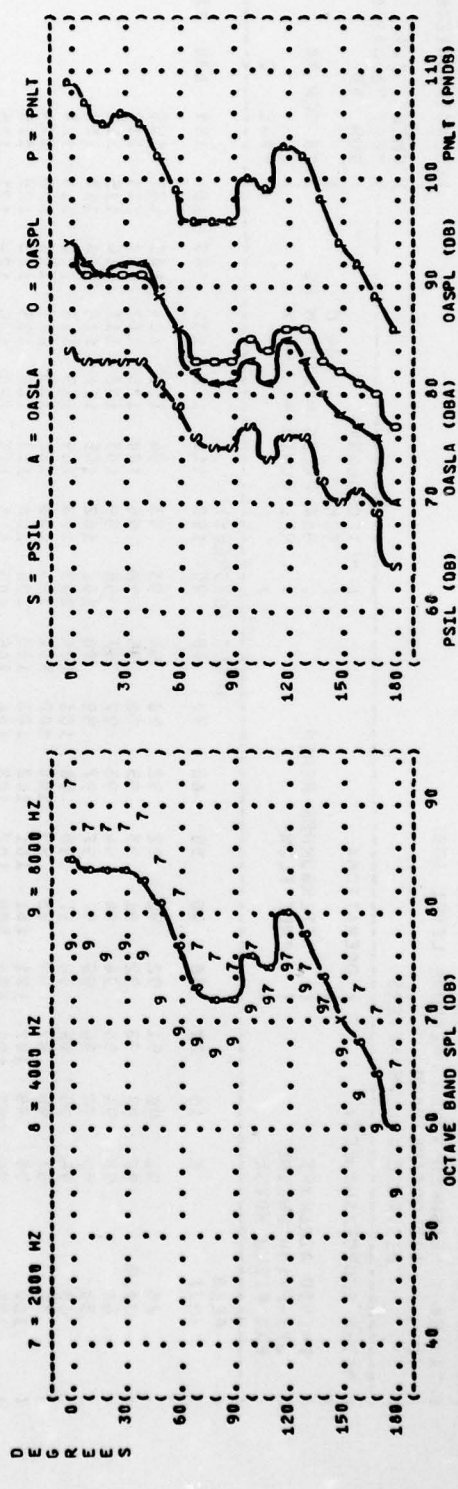
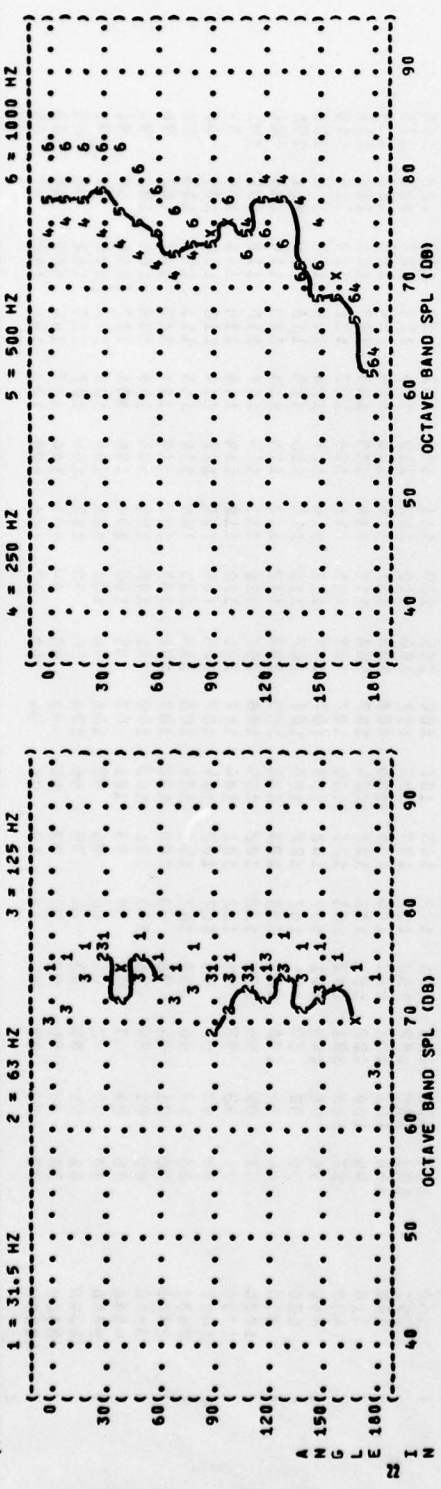
TABLE: MEASURED SOUND PRESSURE LEVEL (DB)																			IDENTIFICATION:	
1/3 OCTAVE BAND																				
DISTANCE = 75 METERS																			OMEGA 1.4	
5																			TEST 78-013-001	
NOISE SOURCE/SUBJECT:																			RUN 04	
( OPERATION:																				
( F-1050 AIRCRAFT																			TEMP = 24 C	
( J75-P-19W ENGINE																			BAR PRESS = .760 M HG	
( FAR FIELD NOISE																			REL HUMID = 44 %	
(																			PAGE 2	
FREQ (HZ)																			ANGLE (DEGREES)	
0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180																				
25 78 76 79 80 81 80 80 80 83 83 83 85 89 94 95 99 100																				
31.5 81 79 80 82 81 82 84 84 85 86 85 86 91 98 100 103 105																				
40 82 82 82 83 84 84 86 88 88 90 89 91 96 100 106 108 107																				
50 84 83 83 85 86 86 87 88 89 90 92 94 99 104 109 111 108																				
63 85 84 84 86 86 88 88 89 92 92 94 96 103 108 112 114 111																				
80 86 86 87 88 88 89 90 91 92 95 96 100 104 111 116 117 112																				
100 89 88 90 90 91 92 92 93 94 96 97 99 101 105 113 118 114																				
125 90 89 91 91 93 93 94 96 96 98 99 100 102 107 113 118 115																				
160 92 92 93 93 93 94 95 96 96 98 99 100 105 109 116 117 120 116																				
200 93 93 93 93 94 95 96 96 98 99 102 105 110 119 117 118 117																				
250 91 93 94 95 95 96 96 97 100 101 103 106 111 118 119 118 118																				
315 89 94 94 95 94 95 98 98 99 101 104 108 112 117 120 118 116																				
400 89 93 93 95 94 95 98 98 99 100 103 107 110 116 117 118 114																				
500 91 92 94 95 94 95 98 98 99 100 103 107 110 114 116 115 111																				
630 90 92 94 95 94 95 98 97 99 99 102 107 109 113 115 114 110																				
800 89 92 95 96 96 96 99 98 100 100 102 108 109 113 115 113 108																				
1000 87 90 94 95 96 96 99 97 99 99 100 106 108 111 114 111 107																				
1250 85 88 91 93 94 95 99 98 100 99 99 106 107 110 113 110 105																				
1600 85 87 89 92 94 94 98 97 99 98 98 106 107 109 112 108 103																				
2000 83 87 89 91 92 93 96 95 97 97 98 104 105 107 110 107 100																				
2500 81 85 87 89 90 91 95 94 96 96 96 104 104 105 109 105 98																				
3150 81 85 87 89 91 91 93 93 93 95 95 95 102 101 105 107 102 96																				
4000 79 83 85 88 89 90 91 91 94 94 93 93 91 99 100 103 100 94																				
5000 76 80 83 85 86 87 91 90 93 93 91 99 99 102 104 100 95																				
6300 74 78 81 83 84 85 89 88 91 91 88 97 97 100 103 98 92																				
8000 73 76 79 81 82 82 87 87 90 90 87 96 97 100 103 99 92																				
10000 69 72 75 77 78 78 84 82 85 87 83 93 94 97 102 97 89																				
OVERALL 101 103 105 106 106 107 109 109 111 111 113 118 121 126 129 128 125																				
LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.																				

LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: MEASURED SOUND PRESSURE LEVEL (DB)																			
1/3 OCTAVE BAND																			
DISTANCE = 75 METERS																			
NOISE SOURCE/SUBJECT:																			
( OPERATION: )																			
( AFTERBURNER POWER )																			
( FREE FLOW )																			
( )																			
F-1050 AIRCRAFT																			
J75-P-19W ENGINE																			
FAR FIELD NOISE																			
TEMP = 24 C																			
BAR PRESS = .768 M HG																			
REL HUMID = 44 %																			
PAGE 2																			
IDENTIFICATION:																			
OMEGA 1.4																			
TEST 78-013-001																			
RUN 05																			
18 SEP 78																			
ANGLE (DEGREES)																			
FREQ (HZ)	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	91	90	91	92	92	92	92	93	94	93	93	96	100	104	106	107	109		
31.5	92	93	93	92	91	95	95	96	95	96	96	96	100	105	107	112	111	112	
40	95	94	94	94	94	94	96	97	97	98	99	103	108	112	115	115	112		
50	95	94	94	95	97	97	97	99	98	101	102	105	112	116	118	117	112		
63	94	96	95	96	97	98	98	101	100	103	103	109	115	119	120	118	113		
80	97	96	97	99	98	99	100	102	101	104	105	112	119	122	122	118	114		
100	99	99	102	101	101	101	102	103	103	106	108	113	120	125	123	120	116		
125	99	100	101	100	100	102	103	104	105	108	111	115	120	126	124	121	116		
160	101	102	102	101	102	103	103	106	105	109	111	118	122	123	124	122	116		
200	101	102	102	100	102	103	105	107	106	110	112	119	125	124	122	120	115		
250	100	102	101	103	104	105	106	108	106	111	114	120	124	124	120	118	114		
315	95	100	100	101	103	103	104	107	108	111	114	119	123	123	121	116	112		
400	97	102	101	102	103	103	106	107	108	111	115	118	122	121	119	115	110		
500	96	98	100	101	102	102	105	107	107	112	114	117	120	120	117	112	108		
630	96	98	99	101	102	102	105	107	107	111	113	116	119	118	115	111	106		
800	94	97	100	101	103	103	106	109	108	112	113	116	118	118	114	110	104		
1000	91	95	98	100	103	102	104	106	107	110	111	114	117	115	112	107	101		
1250	89	93	97	99	102	102	104	107	106	110	110	114	116	114	111	106	99		
1600	88	93	97	99	102	102	104	107	106	109	110	112	114	113	110	105	98		
2000	88	93	96	99	102	102	104	106	103	108	109	110	113	111	108	103	96		
2500	86	91	94	96	99	100	102	105	102	107	108	110	111	110	107	102	94		
3150	86	91	94	96	100	101	103	105	101	105	106	108	110	109	106	100	93		
4000	86	90	93	95	98	99	101	103	99	102	104	106	108	107	104	99	91		
5000	88	90	92	92	96	96	98	101	98	101	104	106	107	107	104	98	91		
6300	81	85	88	90	94	95	96	100	96	99	103	104	107	105	103	96	89		
8000	78	83	86	88	92	93	95	97	95	99	103	104	107	104	102	95	88		
10000	76	79	82	84	88	89	91	94	93	97	101	100	104	102	100	92	85		
OVERALL	110	111	112	113	115	115	117	119	118	122	124	128	133	134	132	129	125		
LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.																			

LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

( FIGURE: NORMALIZED FARFIELD NOISE LEVELS  
 ( 3  
 ( DISTANCE = 100 METERS  
 ( NOISE SOURCE/SUBJECT: F-105D AIRCRAFT  
 ( J75-P-19W ENGINE  
 ( FAR FIELD NOISE  
 ( IDENTIFICATION: OMEGA 1.4  
 ( TEST 78-013-001  
 ( RUN 01  
 ( METEOROLOGY: TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( 10 SEP 78  
 ( PAGE 6



( FIGURE: NORMALIZED FARFIELD NOISE LEVELS  
 ( 3 DISTANCE = 100 METERS  
 ( NOISE SOURCE/SUBJECT:  
 ( F-1050 AIRCRAFT  
 ( J75-P-19N ENGINE  
 ( FAR FIELD NOISE  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 78-013-001  
 ( RUN 02  
 ( METEOROLOGY:  
 ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( 18 SEP 78  
 ( PAGE 6

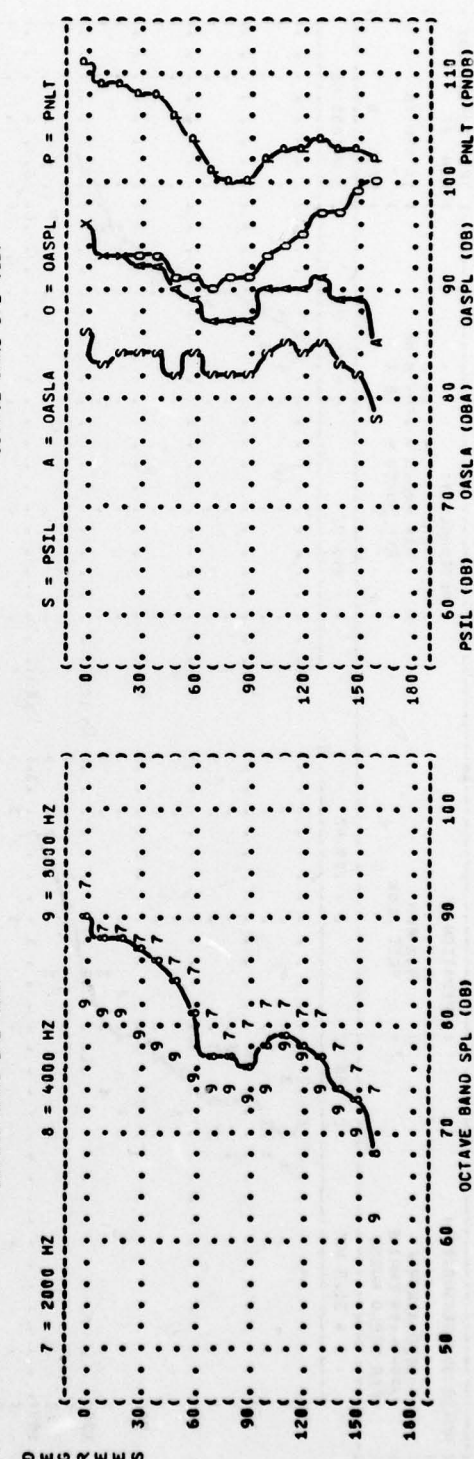
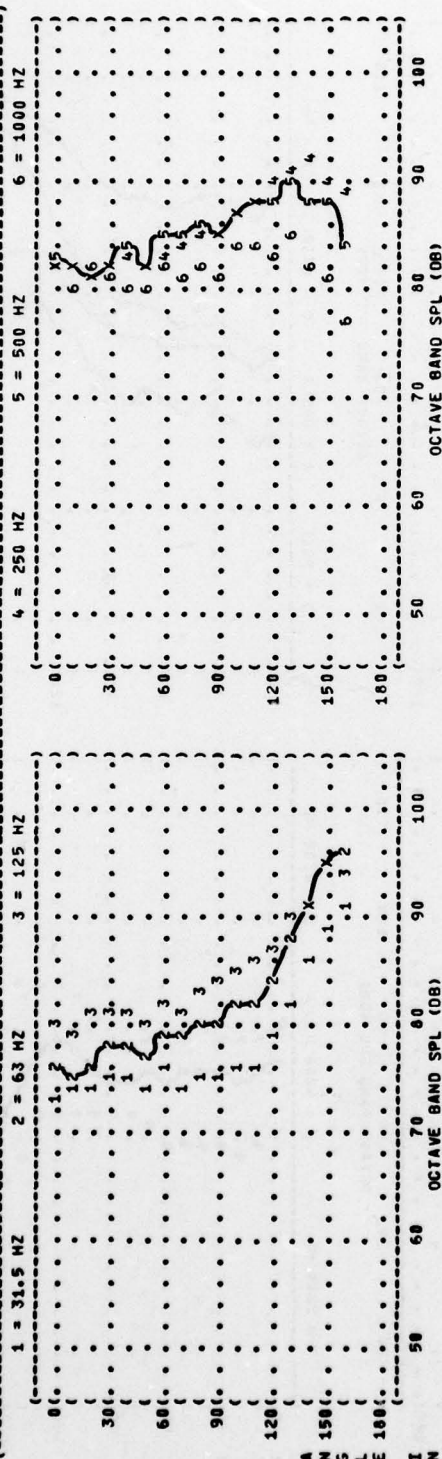


FIGURE: NORMALIZED FARFIELD NOISE LEVELS

3 DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:

F-1050 AIRCRAFT

J75-P-15W ENGINE

FAR FIELD NOISE

OPERATION:

90% RPM

FREE FLOW

METEOROLOGY:

TEMP = 15 C

BAR PRESS = .760 M HG

REL HUMID = 70 %

IDENTIFICATION:

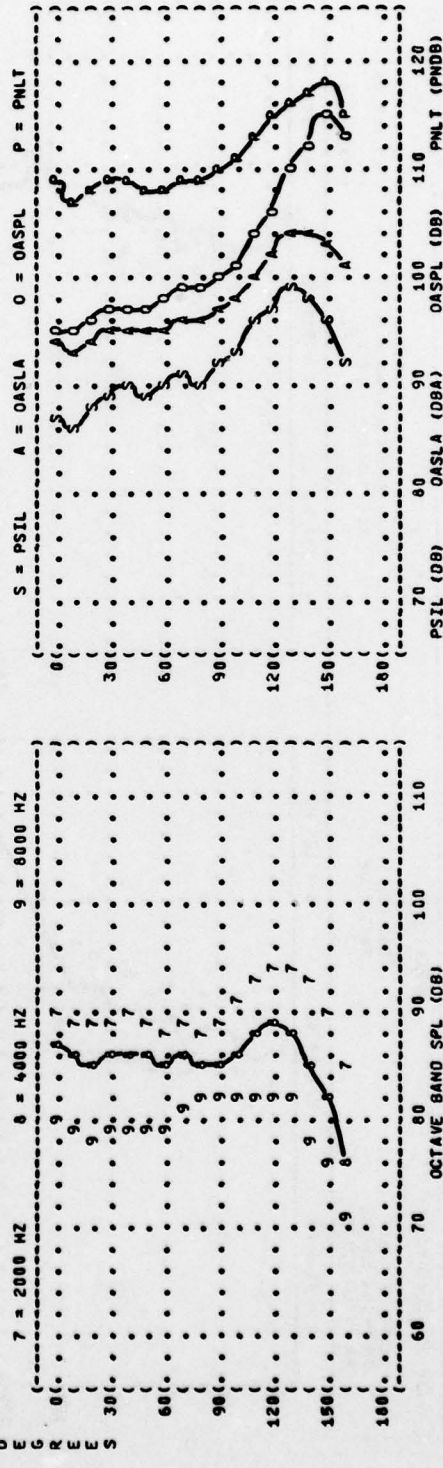
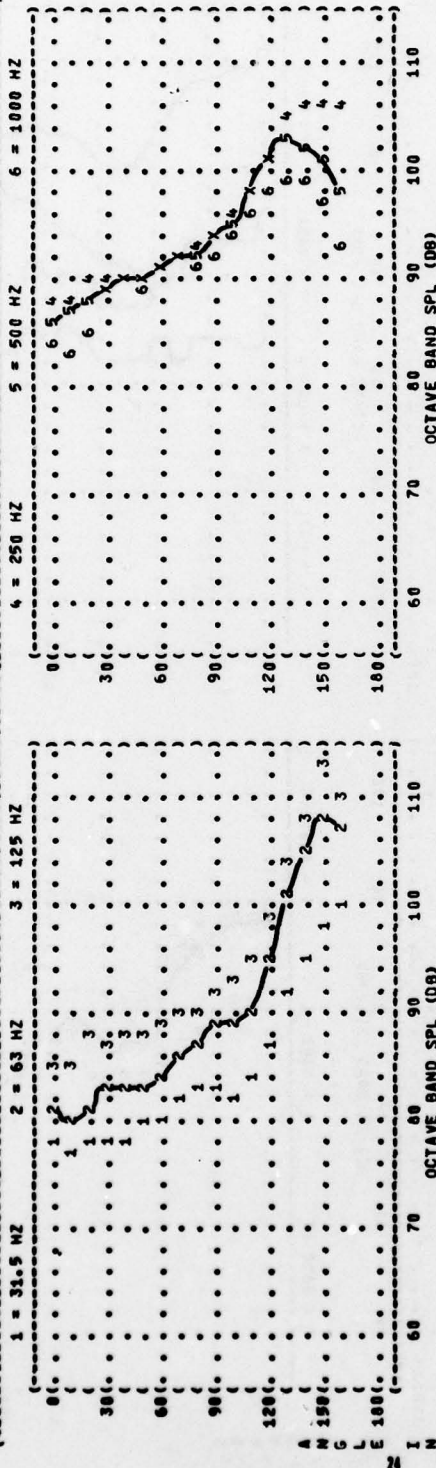
OMEGA 1.4

TEST 78-013-001

RUN 03

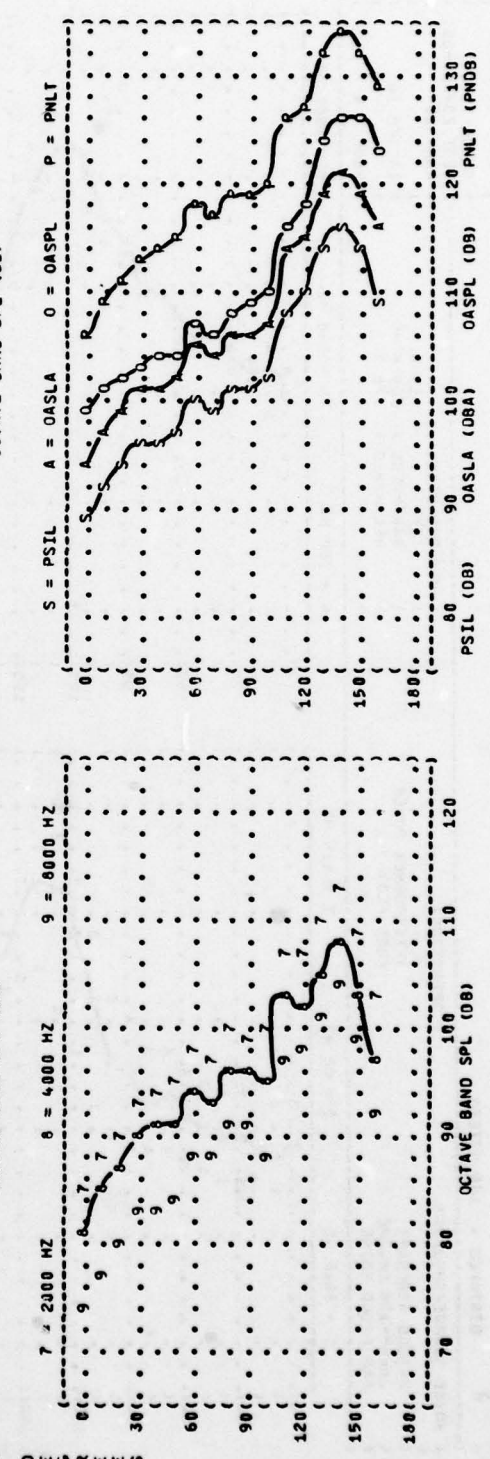
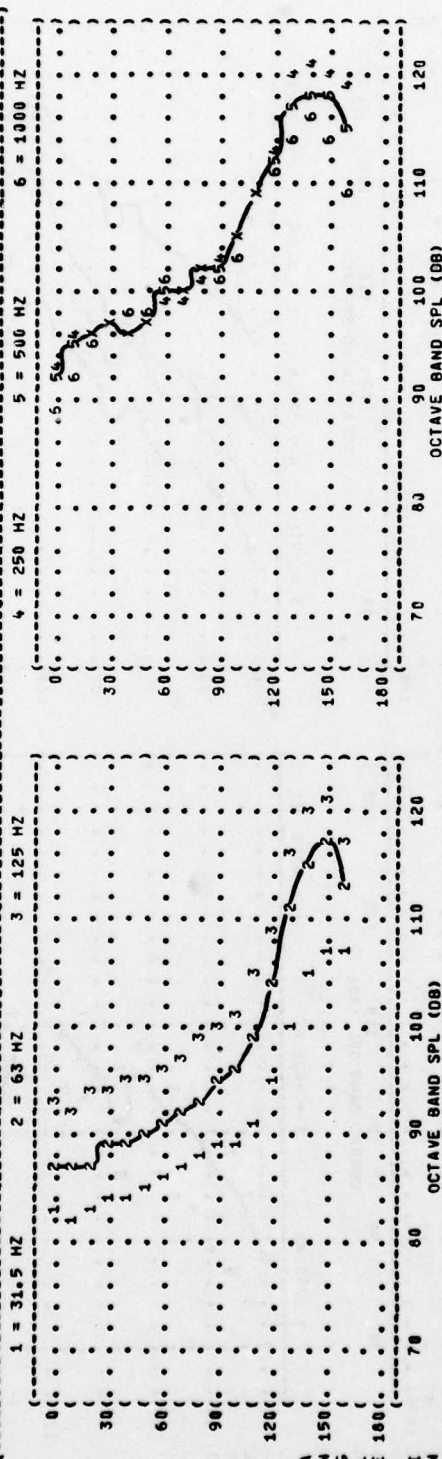
18 SEP 78

PAGE 6



22

IDENTIFICATION: OMEGA 1.4  
 TEST 78-013-001  
 RUN 04  
 10 SEP 78  
 PAGE 6  
 METEOROLOGY: TEMP = 15 C  
 BAR PRESS = .760 M HG  
 REL HUMID = 70 %  
 NOISE SOURCE/SUBJECT: F-1050 AIRCRAFT  
 J75-P-19W ENGINE  
 FAR FIELD NOISE  
 OPERATION: MILITARY POWER  
 FREE FLOW  
 DISTANCE = 100 METERS  
 NOISE SOURCE/SUBJECT: F-1050 AIRCRAFT  
 J75-P-19W ENGINE  
 FAR FIELD NOISE



A N  
 G C  
 L L  
 E 100  
 I N

D E  
 G R  
 R E  
 E E  
 S

FIGURE: NORMALIZED FARFIELD NOISE LEVELS  
 3 DISTANCE = 100 METERS  
 NOISE SOURCE/SUBJECT:  
 F-105D AIRCRAFT  
 J75-P-19W ENGINE  
 FAR FIELD NOISE  
 OPERATION:  
 AFTERBURNER POWER  
 FREE FLOW  
 METEOROLOGY:  
 TEMP = 15 C  
 BAR PRESS = .760 M HG  
 REL HUMID = 70 %  
 IDENTIFICATION:  
 OMEGA 1.4  
 TEST 78-013-001  
 RUN 05  
 10 SEP 78  
 PAGE 6

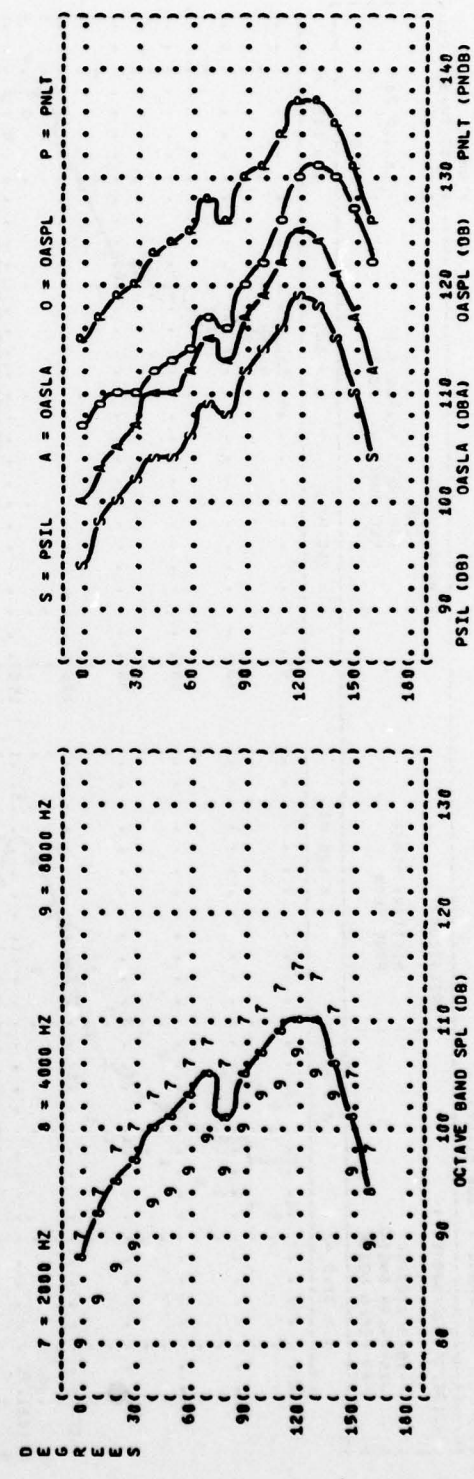
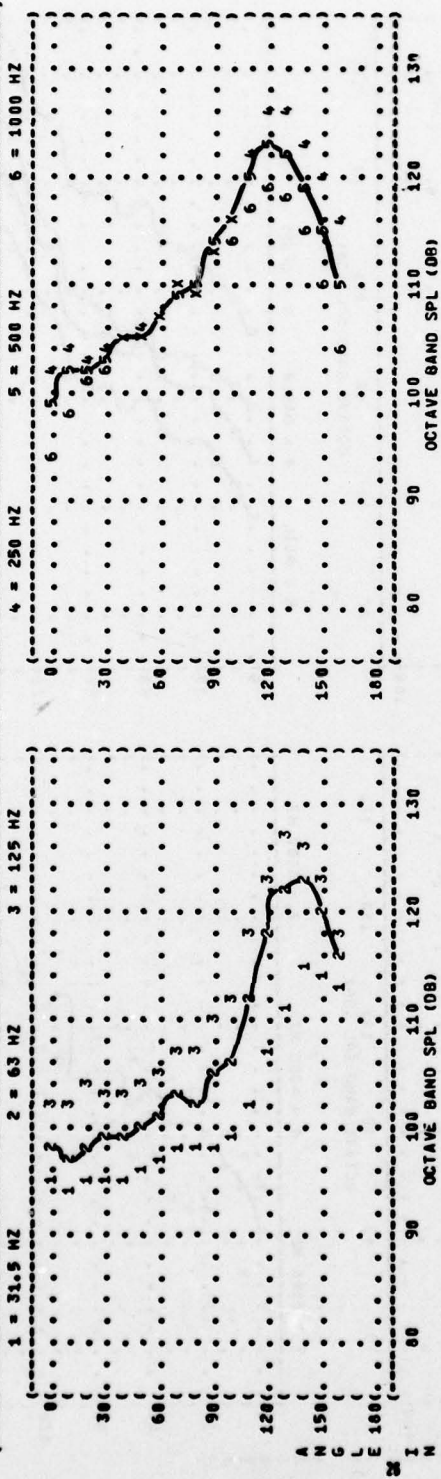


FIGURE: ACOUSTIC POWER LEVEL (PNL)

4

IDENTIFICATION:

OMEGA 1.4

TEST 78-013-001

RUN 01

10 SEP 70

PAGE 3

NOISE SOURCE/SUBJECT:

OPERATION:

TEMP = 24 C

BAR PRESS = .768 M HG

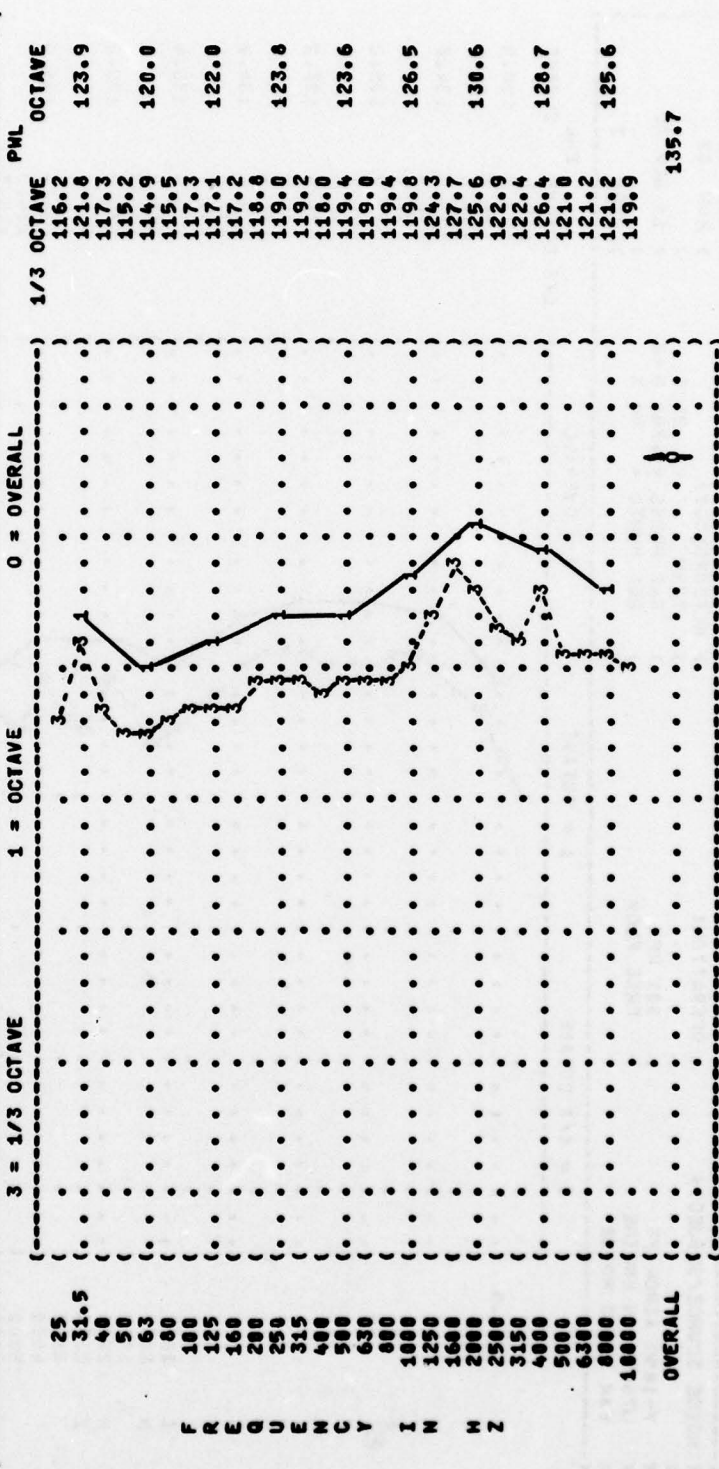
REL HUMID = 44 %

F-105D AIRCRAFT

J75-P-19M ENGINE

FREE FLOW

FAR FIELD NOISE



( ( FIGURE: ACOUSTIC POWER LEVEL (PWL) ) )  
 ( ( 4 ) )  
 ( ( NOISE SOURCE/SUBJECT: ) )  
 ( ( F-1050 AIRCRAFT ) )  
 ( ( J75-P-19M ENGINE ) )  
 ( ( FAR FIELD NOISE ) )  
 ( ( OPERATION: ) )  
 ( ( 80% RPM ) )  
 ( ( FREE FLOW ) )  
 ( ( METEOROLOGY: ) )  
 ( ( TEMP = 24 C ) )  
 ( ( BAR PRESS = .768 M HG ) )  
 ( ( REL HUMID = 44 % ) )  
 ( ( IDENTIFICATION: ) )  
 ( ( OMEGA 1.4 ) )  
 ( ( TEST 78-013-001 ) )  
 ( ( RUN 02 ) )  
 ( ( 18 SEP 78 ) )  
 ( ( PAGE 3 ) )

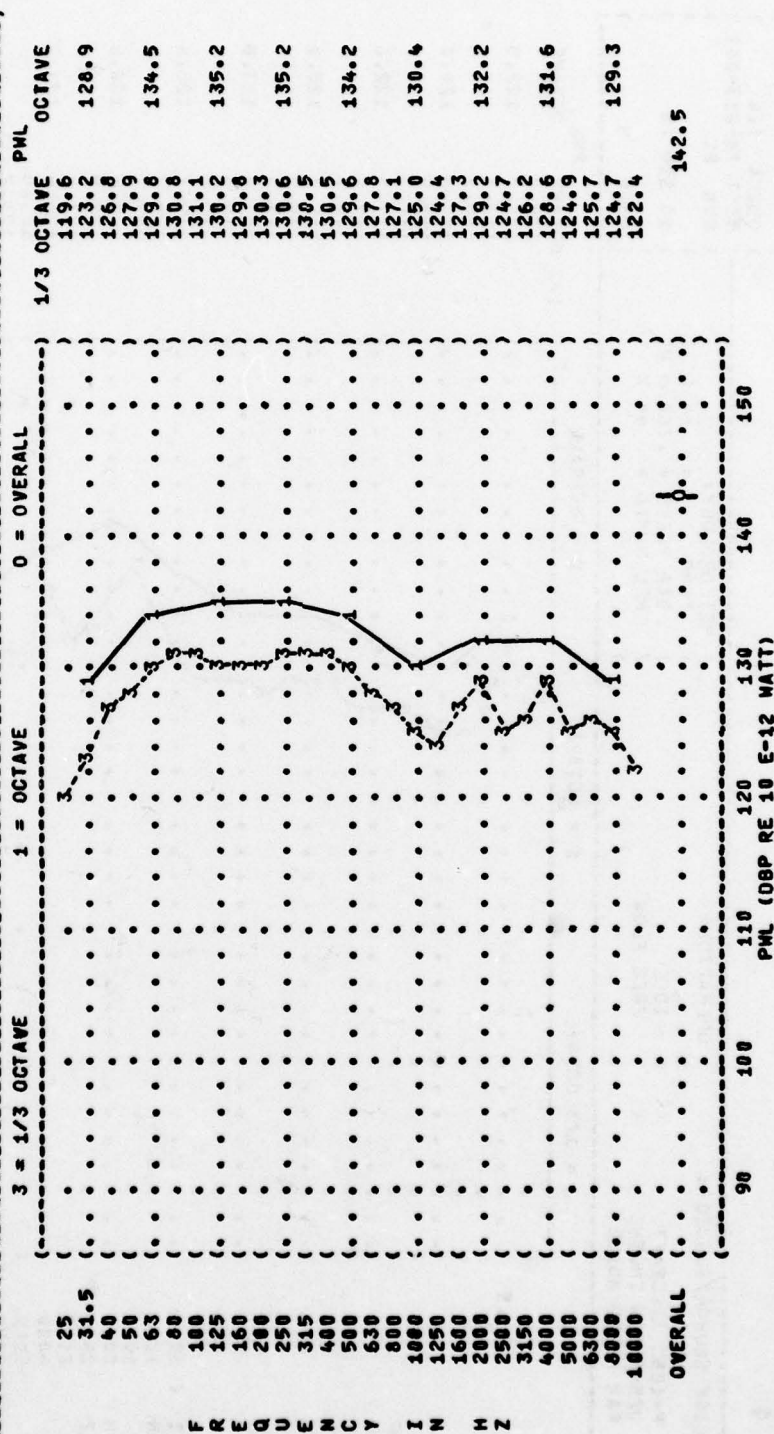


FIGURE: ACOUSTIC POWER LEVEL (PWL)

4

IDENTIFICATIONS:

OMEGA 1.4

TEST 78-813-001

RUN 03

18 SEP 78

PAGE 3

NOISE SOURCE/SUBJECT:

OPERATION:

90% RPM

FREE FLOW

METEOROLOGY:

TEMP = 24 C

BAR PRESS = .768 M HG

REL HUMID = 44 %

F-105D AIRCRAFT

J75-P-19M ENGINE

FAR FIELD NOISE

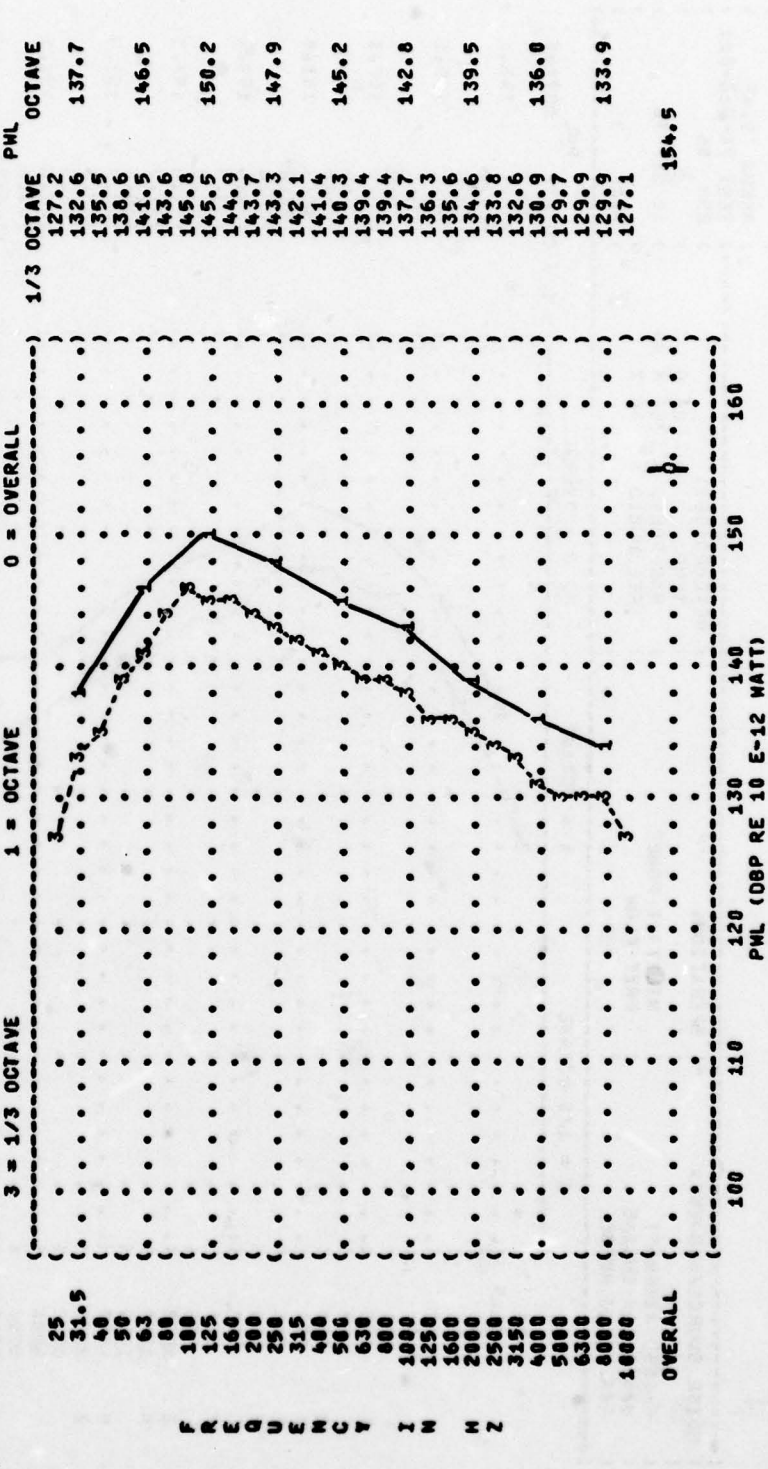


FIGURE 1. ACOUSTIC POWER LEVEL {PWL}

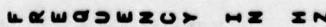


FIGURE: ACOUSTIC POWER LEVEL (PWL)  
 4  
 NOISE SOURCE/SUBJECT: ( OPERATION: ) METEOROLOGY: TEMP = 24 C  
 F-105D AIRCRAFT ( AFTERBURNER POWER ) BAR PRESS = .768 M HG  
 J75-P-19M ENGINE ( FREE FLOW ) REL HUMID = 44 %  
 FAR FIELD NOISE ( ) PAGE 3

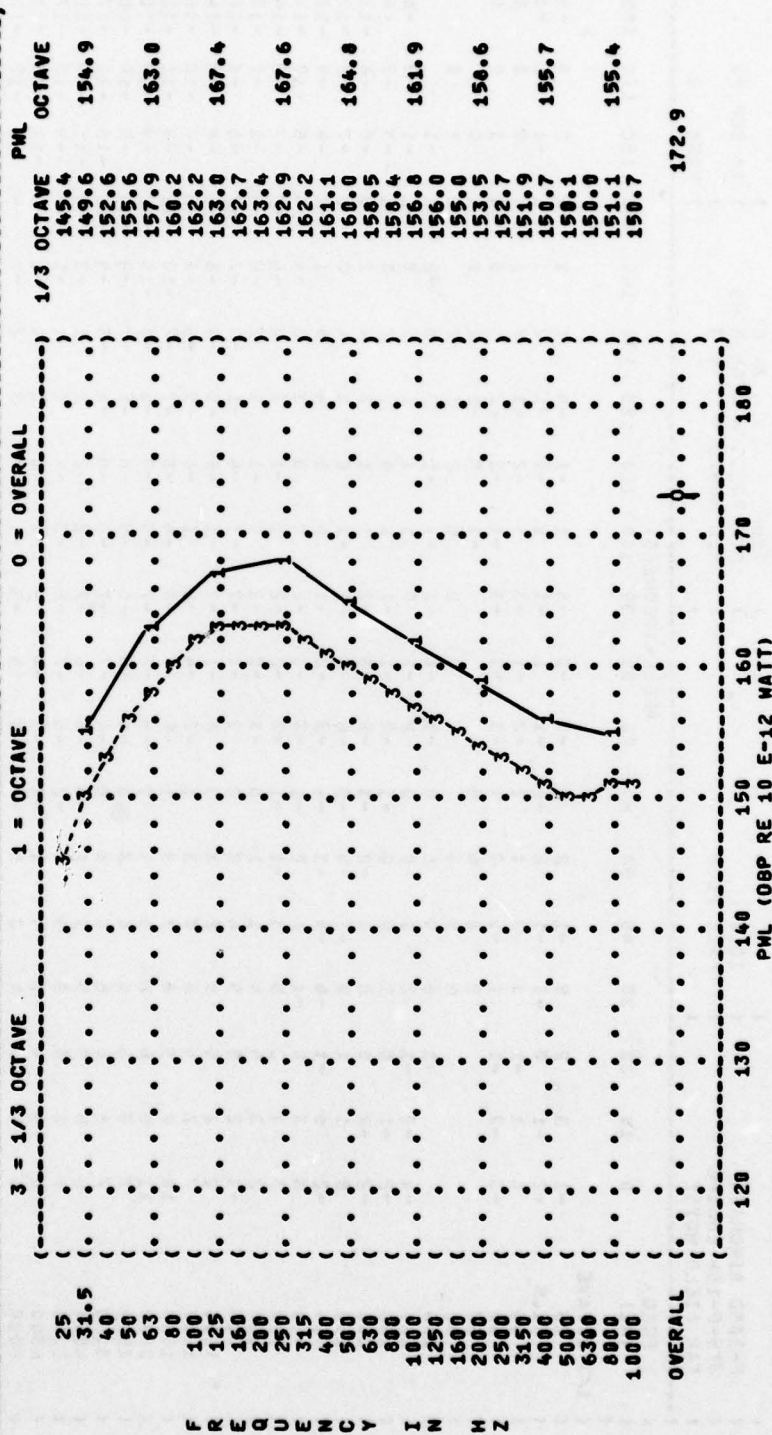


TABLE: DIRECTIVITY INDEX (DB)																
IDENTIFICATION:																
6																
NOISE SOURCE/SUBJECT:																
F-105D AIRCRAFT																
J75-P-19W ENGINE																
FAR FIELD NOISE																
OPERATION:																
IDLE																
FREE FLOW																
METEOROLOGY:																
TEMP = 24 C																
BAR PRESS = .768 M HG																
REL HUMID = 44 %																
PAGE 4																
OMEGA 1.4																
TEST 78-013-001																
RUN 01																
10 SEP 78																
FREQ (HZ)																
ANGLE (DEGREES)																
1/3 OCTAVE																
25	-1	3	-2	5	-1	2	0	-3	-6	1	-1	-4	1	1	2	0
31.5	-2	-1	0	-1	-1	2	0	-1	-1	0	-1	-1	1	1	1	-1
40	0	1	-1	1	-2	1	-3	-3	-3	1	-2	-1	3	1	1	0
50	-3	-2	-1	1	-1	3	4	-3	-3	-1	-2	-2	1	0	0	1
63																
80																
100																
125	-4	-3	-1	6	0	1	0	-1	-1	0	2	1	2	0	1	0
160	-2	-1	0	2	0	0	0	-2	-1	1	1	0	0	-1	-1	-2
200	-2	-2	0	1	0	0	0	-3	-1	0	0	3	2	-1	-3	-3
250	0	1	1	0	0	-4	-5	-4	-3	1	1	4	4	0	0	-6
315	-2	0	-1	-4	-5	-3	-2	-3	-2	-1	0	4	5	-1	-5	-12
400	3	3	0	1	1	2	-1	-1	-1	0	0	3	3	-1	-4	-5
500	2	3	2	5	4	1	0	-1	-2	1	-1	2	2	-5	-7	-10
630	-1	2	4	4	4	3	0	0	-2	0	-1	1	-3	-6	-8	-14
800	2	2	5	5	5	3	0	0	-2	-1	-4	-5	-6	-7	-8	-14
1000	7	7	6	6	6	6	1	-2	-4	-1	-5	-5	-6	-6	-7	-10
1250	10	7	5	6	6	6	1	-5	-7	-4	-8	-7	-10	-12	-9	-16
1600	11	6	6	6	6	6	0	-6	-7	-5	-9	-6	-10	-12	-9	-16
2000	7	5	6	6	6	6	0	-4	-6	-5	-8	-7	-9	-10	-9	-16
2500	7	5	6	6	6	6	0	-4	-6	-5	-8	-7	-9	-10	-9	-16
3150	6	5	5	5	5	5	3	-6	-7	-6	-8	-4	-9	-11	-11	-17
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6300	5	4	4	4	4	4	3	-5	-6	-5	-7	-3	-8	-10	-13	-17
8000	4	4	4	4	4	4	3	-5	-6	-5	-7	-3	-8	-10	-13	-17
10000	4	4	4	4	4	4	3	-5	-6	-5	-7	-3	-8	-10	-13	-17
OCTAVE																
31.5	-1	0	0	1	-1	2	0	-2	0	0	-1	-1	2	1	1	-1
63	-5	-3	0	4	3	0	0	-2	-3	-1	0	0	1	-1	0	-2
125	-1	0	0	-1	-2	-3	-4	-5	-3	0	0	4	5	0	-1	-4
250	2	3	2	3	2	0	-1	-2	-2	0	-1	2	2	-3	-7	-9
500	5	5	4	5	4	3	1	-1	-2	-1	-5	-6	-7	-6	-8	-14
1000	10	6	6	6	6	6	3	-5	-6	-5	-8	-7	-9	-10	-9	-16
2000	7	5	5	5	5	5	4	-6	-7	-6	-8	-4	-9	-11	-11	-17
4000	7	5	5	5	5	5	4	-6	-7	-6	-8	-4	-9	-11	-14	-19
8000	5	4	4	4	4	4	3	-5	-6	-5	-7	-3	-8	-10	-13	-17
10000	4	4	4	4	4	4	3	-5	-6	-5	-7	-3	-8	-10	-13	-17
OVERALL																
7	7	5	4	5	4	2	0	-3	-4	-2	-3	0	0	-3	-4	-5
																-7
																-10

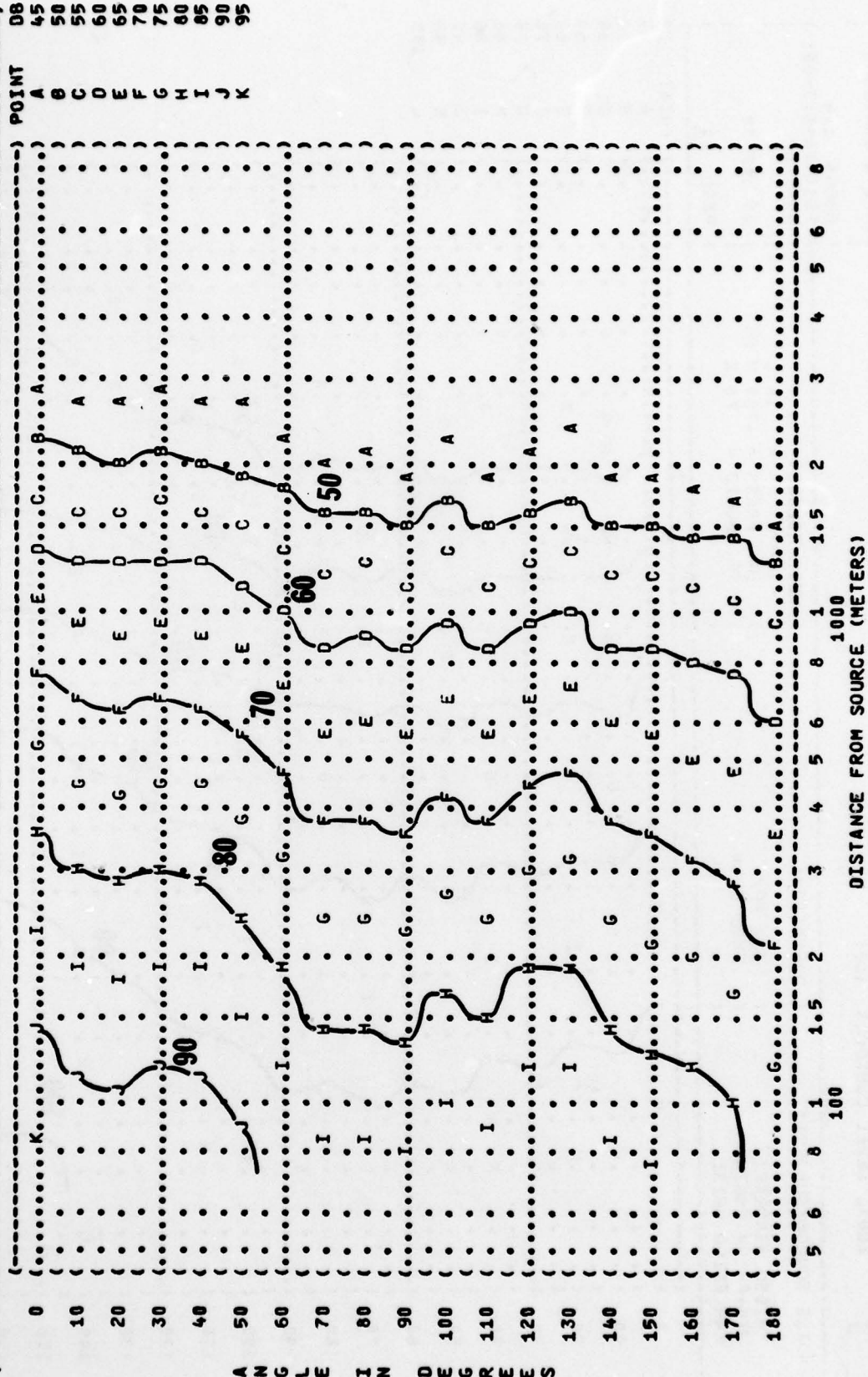
TABLE: DIRECTIVITY INDEX (DB)																			
6																			
IDENTIFICATION:																			
OMEGA 1.4																			
TEST 78-013-001																			
RUN 02																			
18 SEP 78																			
PAGE 4																			
NOISE SOURCE/SUBJECT: ( OPERATION: ) METEOROLOGY: )																			
F-1050 AIRCRAFT ) TEMP = 24 C																			
J75-P-19W ENGINE ) BAR PRESS = .768 M HG																			
FAR FIELD NOISE ) REL HUMID = 44 %																			
FREQ	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
(HZ)																			
ANGLE (DEGREES)																			
1/3 OCTAVE																			
25	-7	-4	-4	-4	-2	-4	-4	-5	-5	-5	-4	-4	-2	0	5	6	9		
31.5	-7	-7	-6	-6	-6	-7	-5	-6	-6	-6	-6	-4	-3	1	4	8	9		
40	-8	-9	-9	-8	-9	-8	-6	-8	-6	-7	-5	-5	-2	1	5	8	10		
50	-11	-10	-9	-8	-9	-7	-6	-8	-6	-6	-5	-5	-2	3	5	8	10		
63	-11	-13	-12	-9	-10	-10	-8	-8	-7	-8	-5	-4	-3	2	5	9	9		
80	-9	-12	-11	-9	-10	-10	-8	-8	-7	-6	-4	-4	-2	1	5	8	10		
100	-9	-10	-7	-7	-6	-7	-6	-6	-6	-5	-4	-3	-1	1	4	9	8		
125	-7	-8	-7	-6	-6	-7	-6	-6	-3	-4	-2	-2	-1	2	4	8	7		
160	-6	-6	-6	-6	-6	-7	-4	-4	-3	-2	-1	0	1	3	4	6	6		
200	-5	-6	-6	-5	-4	-5	-4	-4	-3	-2	0	0	2	4	5	3	3		
250	-5	-5	-6	-5	-4	-6	-4	-4	-2	-3	0	1	2	4	5	3	1		
315	-8	-6	-6	-5	-6	-6	-4	-3	-1	-2	1	2	2	3	2	2	-1		
400	-6	-6	-6	-5	-2	-4	-2	-1	0	-2	2	2	2	3	2	2	-2		
500	-4	-5	-6	-4	-3	-4	-1	-1	-1	-1	2	2	2	3	0	0	-5		
630	0	-3	-4	-1	-2	-3	0	-1	0	-1	2	2	2	3	0	0	-6		
800	0	-3	-1	-1	-2	-3	-1	-1	-1	-1	2	2	2	2	-1	-3	-7		
1000	-1	-3	-1	-1	-2	-3	-1	-1	-1	-1	3	2	1	-2	-5	-6	-9		
1250	1	-1	0	0	-1	2	1	-1	-1	-1	3	2	-2	-4	-7	-7	-10		
1600	8	4	5	5	4	3	1	-3	-4	-3	0	-1	-2	-4	-7	-8	-11		
2000	10	6	6	6	6	4	1	-2	-4	-2	0	0	-1	-4	-7	-8	-13		
2500	9	6	4	4	4	4	0	-4	-6	-6	-3	-3	-4	-7	-7	-8	-14		
3150	9	8	7	6	6	5	0	-4	-6	-6	-6	-5	-6	-9	-10	-10	-14		
4000	9	7	7	6	5	4	0	-4	-6	-6	-6	-5	-6	-9	-10	-10	-14		
5000	8	5	4	4	3	3	0	-1	-3	-2	-1	2	2	-3	-4	-6	-15		
6300	6	4	4	3	3	2	0	-1	-1	-1	-2	1	1	-2	-3	-6	-14		
8000	7	5	6	3	3	1	-1	-2	-2	-3	-2	1	1	-1	-4	-6	-14		
10000	7	6	6	4	3	1	-3	-3	-2	-2	0	1	1	0	-4	-7	-14		
OCTAVE																			
31.5	-8	-7	-7	-7	-6	-7	-5	-7	-6	-6	-5	-5	-2	1	5	8	10		
63	-10	-12	-11	-9	-9	-9	-8	-8	-7	-7	-5	-4	-3	2	5	8	9		
125	-7	-9	-7	-6	-6	-7	-5	-6	-4	-4	-2	-2	0	2	4	8	7		
250	-6	-5	-6	-6	-4	-5	-4	-3	-2	-2	0	1	2	4	4	3	1		
500	-3	-5	-5	-4	-2	-4	-1	-1	0	-1	1	2	2	3	2	1	-3		
1000	0	-2	-1	-1	-2	-3	0	-1	-1	-1	2	2	1	3	0	-1	-6		
2000	9	5	6	4	5	2	1	-4	-5	-4	-2	-2	-3	-5	-7	-8	-10		
4000	9	7	7	6	4	3	0	-4	-5	-5	-6	-5	-6	-7	-7	-8	-13		
6000	6	4	4	3	3	2	0	-1	-1	-1	-2	-1	2	-2	-4	-6	-14		
8000	7	5	6	3	3	1	-1	-2	-2	-3	-2	1	1	-1	-3	-6	-14		
10000	7	6	6	4	3	1	-3	-3	-2	-2	0	1	1	0	-4	-7	-14		
OVERALL	2	-1	-1	-1	-1	-3	-3	-4	-3	-3	-1	0	0	2	3	5	5		

TABLE: DIRECTIVITY INDEX (DB)																
IDENTIFICATION:																
6																
NOISE SOURCE/SUBJECT:																
F-1050 AIRCRAFT																
J75-P-19M ENGINE																
FAR FIELD NOISE																
OPERATION:																
90% RPM																
FREE FLOW																
METEOROLOGY:																
TEMP = 24 C																
BAR PRESS = .760 M HG																
REL HUMID = 44 %																
PAGE 4																
OMEGA 1.4																
TEST 78-013-001																
RUN 83																
18 SEP 78																
FREQ (HZ)																
ANGLE (DEGREES)																
1/3 OCTAVE																
25	-7	-9	-7	-7	-7	-7	-7	-7	-7	-7	-7	-7	-7	-7	-7	-7
31.5	-12	-14	-12	-11	-12	-12	-11	-12	-12	-12	-12	-12	-12	-12	-12	-12
40	-13	-14	-13	-13	-13	-13	-13	-13	-13	-13	-13	-13	-13	-13	-13	-13
50	-16	-17	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16
63	-19	-20	-19	-17	-16	-17	-15	-17	-15	-17	-15	-17	-15	-17	-15	-17
80	-18	-19	-18	-16	-15	-16	-15	-16	-15	-16	-15	-16	-15	-16	-15	-16
100	-18	-19	-18	-16	-15	-16	-15	-16	-15	-16	-15	-16	-15	-16	-15	-16
125	-17	-17	-15	-15	-15	-15	-15	-15	-15	-15	-15	-15	-15	-15	-15	-15
160	-17	-16	-14	-14	-13	-14	-13	-14	-13	-14	-13	-14	-13	-14	-13	-14
200	-13	-14	-12	-12	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11
250	-10	-10	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9
315	-14	-12	-10	-11	-10	-10	-9	-10	-9	-10	-9	-10	-9	-10	-9	-10
400	-13	-10	-9	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8
500	-11	-11	-9	-8	-7	-7	-6	-7	-6	-7	-6	-7	-6	-7	-6	-7
630	-10	-11	-8	-6	-6	-6	-5	-6	-5	-6	-5	-6	-5	-6	-5	-6
800	-12	-12	-9	-6	-5	-5	-4	-5	-4	-5	-4	-5	-4	-5	-4	-5
1000	-11	-12	-9	-5	-4	-4	-3	-4	-3	-4	-3	-4	-3	-4	-3	-4
1250	-9	-9	-10	-6	-5	-5	-4	-5	-4	-5	-4	-5	-4	-5	-4	-5
1600	-5	-5	-6	-5	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4
2000	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2500	1	-1	0	0	1	1	1	1	1	1	1	1	1	1	1	1
3150	-2	-1	-2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4000	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5000	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6300	-1	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2
8000	-1	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3
10000	0	-1	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2
OCTAVE																
31.5	-12	-13	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12
63	-18	-19	-18	-16	-15	-16	-15	-16	-15	-16	-15	-16	-15	-16	-15	-16
125	-17	-18	-15	-15	-14	-15	-14	-15	-14	-15	-14	-15	-14	-15	-14	-15
250	-12	-12	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10
500	-11	-11	-9	-8	-7	-7	-6	-7	-6	-7	-6	-7	-6	-7	-6	-7
1000	-11	-11	-9	-6	-5	-6	-4	-6	-4	-6	-4	-6	-4	-6	-4	-6
2000	0	-2	-2	-2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4000	1	0	-1	0	0	0	0	0	0	0	0	0	0	0	0	0
8000	-1	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2
OVERALL	-11	-12	-10	-10	-9	-10	-9	-10	-9	-10	-9	-10	-9	-10	-9	-10

TABLE: DIRECTIVITY INDEX (DB)																			
6																			
NOISE SOURCE/SUBJECT: ( ) OPERATION: ( ) METEOROLOGY: ( ) IDENTIFICATION: ( )																			
F-1050 AIRCRAFT ( ) MILITARY POWER ( ) TEMP = 24 C ( ) OMEGA 1.4																			
J75-P-19W ENGINE ( ) FREE FLOW ( ) BAR PRESS = .768 M HG ( ) TEST 78-013-001																			
FAR FIELD NOISE ( ) REL HUMID = 44 % ( ) RUN 04																			
PAGE 4																			
FREQ (HZ)	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
1/3 OCTAVE																			
25	-12	-12	-11	-11	-10	-10	-10	-11	-8	-7	-6	-6	-2	3	4	9	9	9	
31.5	-13	-16	-14	-13	-13	-12	-11	-11	-10	-9	-10	-8	-4	3	5	9	9	10	
40	-17	-17	-17	-16	-15	-15	-13	-11	-11	-9	-10	-8	-3	1	7	9	9	8	
50	-18	-18	-19	-17	-16	-16	-14	-14	-13	-12	-9	-7	-3	3	7	9	9	6	
63	-20	-21	-21	-19	-19	-17	-16	-16	-13	-13	-11	-9	-2	3	8	9	9	6	
80	-22	-22	-21	-20	-19	-18	-17	-16	-15	-14	-11	-9	-4	3	8	9	9	4	
100	-20	-21	-20	-19	-19	-18	-17	-16	-15	-14	-11	-9	-5	3	8	9	9	4	
125	-20	-21	-19	-19	-17	-17	-16	-16	-14	-13	-11	-9	-4	2	8	9	9	4	
160	-19	-19	-18	-18	-17	-17	-15	-14	-12	-12	-10	-6	-1	5	6	9	9	6	
200	-18	-18	-18	-17	-17	-16	-15	-15	-13	-12	-10	-6	-1	7	6	7	6	6	
250	-21	-19	-18	-17	-17	-16	-16	-15	-12	-11	-9	-6	-1	6	7	6	6	6	
315	-23	-18	-18	-17	-18	-17	-14	-14	-12	-10	-8	-4	0	5	8	6	4	4	
400	-21	-18	-17	-16	-16	-15	-13	-12	-10	-9	-6	-3	0	5	7	8	4	4	
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630	-18	-15	-14	-12	-12	-11	-9	-10	-9	-9	-6	-1	1	6	7	6	2	2	
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2000	-19	-16	-14	-12	-10	-9	-7	-8	-5	-6	-5	2	2	4	8	4	-2	-3	
2500	-21	-17	-15	-13	-11	-10	-6	-7	-5	-6	-5	2	2	4	8	3	-3	-3	
3150	-19	-15	-13	-11	-9	-8	-6	-7	-5	-4	-5	3	1	5	7	2	-4	-4	
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5000	-21	-17	-14	-12	-11	-10	-6	-7	-4	-4	-6	2	2	5	7	3	-2	-2	
6300	-21	-17	-14	-12	-11	-11	-7	-7	-4	-4	-7	2	2	5	8	3	-3	-3	
8000	-23	-20	-16	-14	-13	-13	-8	-8	-5	-5	-8	1	2	5	8	4	-3	-3	
10000	-24	-20	-17	-15	-14	-15	-9	-10	-7	-6	-9	0	1	4	9	4	-4	-4	
OCTAVE																			
31.5	-15	-16	-16	-14	-14	-13	-12	-11	-10	-9	-8	-8	-3	2	6	9	9	9	
63	-21	-21	-20	-19	-19	-18	-17	-16	-14	-13	-11	-7	-3	3	8	9	5	5	
125	-20	-20	-19	-19	-18	-17	-16	-15	-13	-13	-11	-7	-3	4	8	9	5	5	
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500	-19	-17	-16	-14	-15	-14	-11	-11	-10	-9	-7	-2	1	6	7	7	3	3	
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4000	-19	-16	-13	-11	-9	-9	-6	-7	-4	-4	-5	3	2	5	7	3	-3	-3	
8000	-22	-19	-16	-13	-13	-12	-8	-6	-5	-5	-8	1	2	5	8	3	-3	-3	
OVERALL																			
	-20	-18	-17	-15	-15	-14	-12	-12	-10	-10	-6	-3	0	5	7	7	4	4	



( FIGURE: OVERALL SOUND PRESSURE LEVEL (OASPL)  
 ( 5  
 ( EQUAL LEVEL CONTOURS (DB)  
 ( ) IDENTIFICATION:  
 ( )  
 ( ) OMEGA 1.4  
 ( ) TEST 78-013-001  
 ( ) RUN 01  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( )  
 ( ) F-1050 AIRCRAFT ( IDLE  
 ( ) J75-P-19W ENGINE ( FREE FLOW  
 ( ) FAR FIELD NOISE ( )  
 ( )  
 ( ) METEOROLOGY:  
 ( ) TEMP = 15 C  
 ( ) BAR PRESS = .760 M HG  
 ( ) REL HUMID = 70 %  
 ( )  
 ( ) PAGE 13  
 ( )



5

```

IDENTIFICATIONS:
)
)
) OMEGA 1.4
) TEST 78-013-00
) RUN 02
)
) 18 SEP 78
)
) PAGE 13

```

METEOROLOGY: 15 C  
TEMP =  
BAR PRESS = .760 M HG  
REL HUMID = 70 %

( OPERATION:  
(  
( 80% RPM  
( FREE FLOW  
(

NOISE SOURCE/SUBJECT:  
F-105D AIRCRAFT  
J75-P-19W ENGINE  
FAR FIELD NOISE

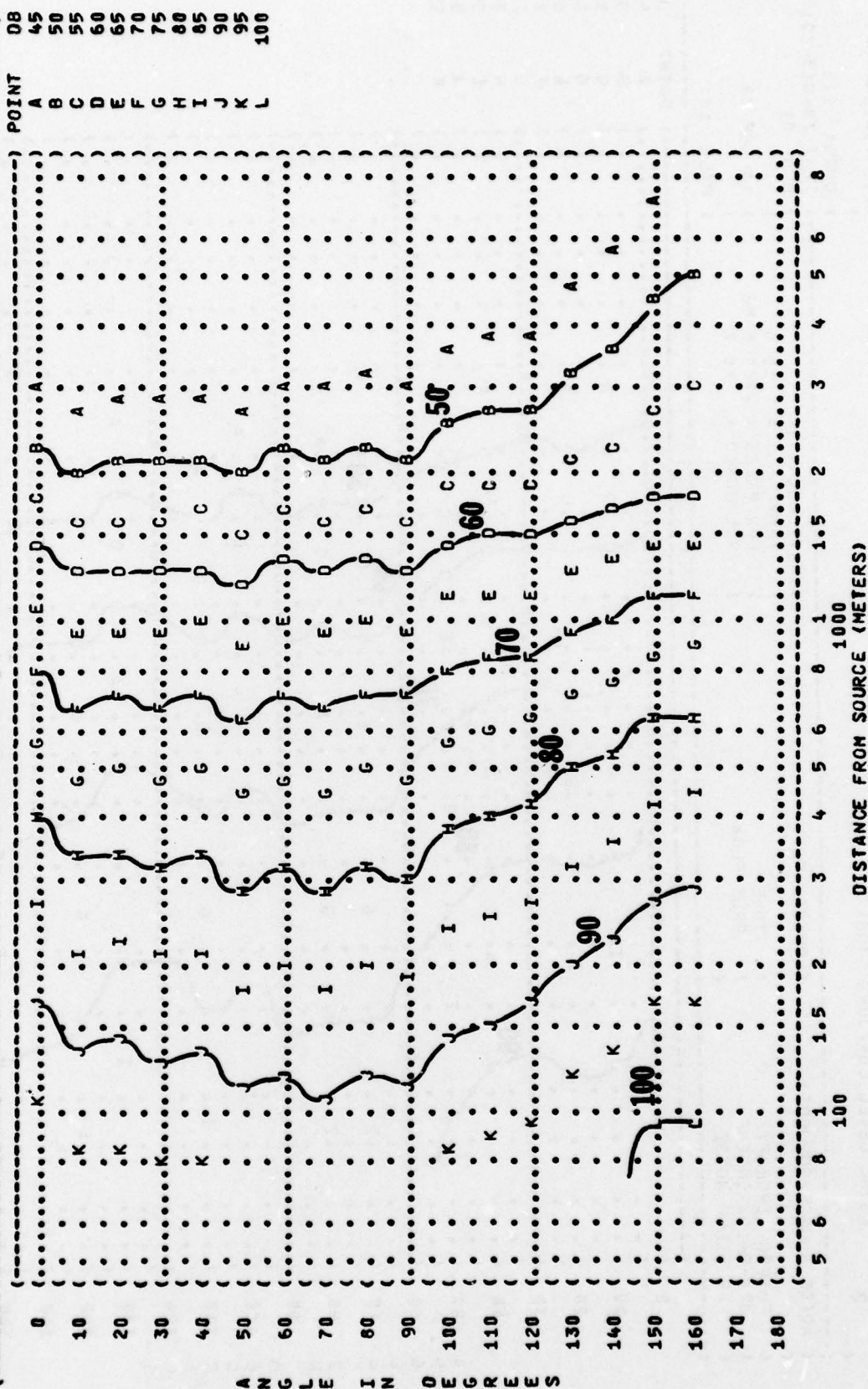




FIGURE: OVERALL SOUND PRESSURE LEVEL (OASPL)  
5  
EQUAL LEVEL CONTOURS (DB)

NOISE SOURCE/SUBJECT:

F-1050 AIRCRAFT  
J75-P-19M ENGINE  
FAR FIELD NOISE

OPERATION:

MILITARY POWER  
FREE FLOW

METEOROLOGY:

TEMP = 15 C  
BAR PRESS = .760 M HG  
REL HUMID = 70 %

IDENTIFICATION:

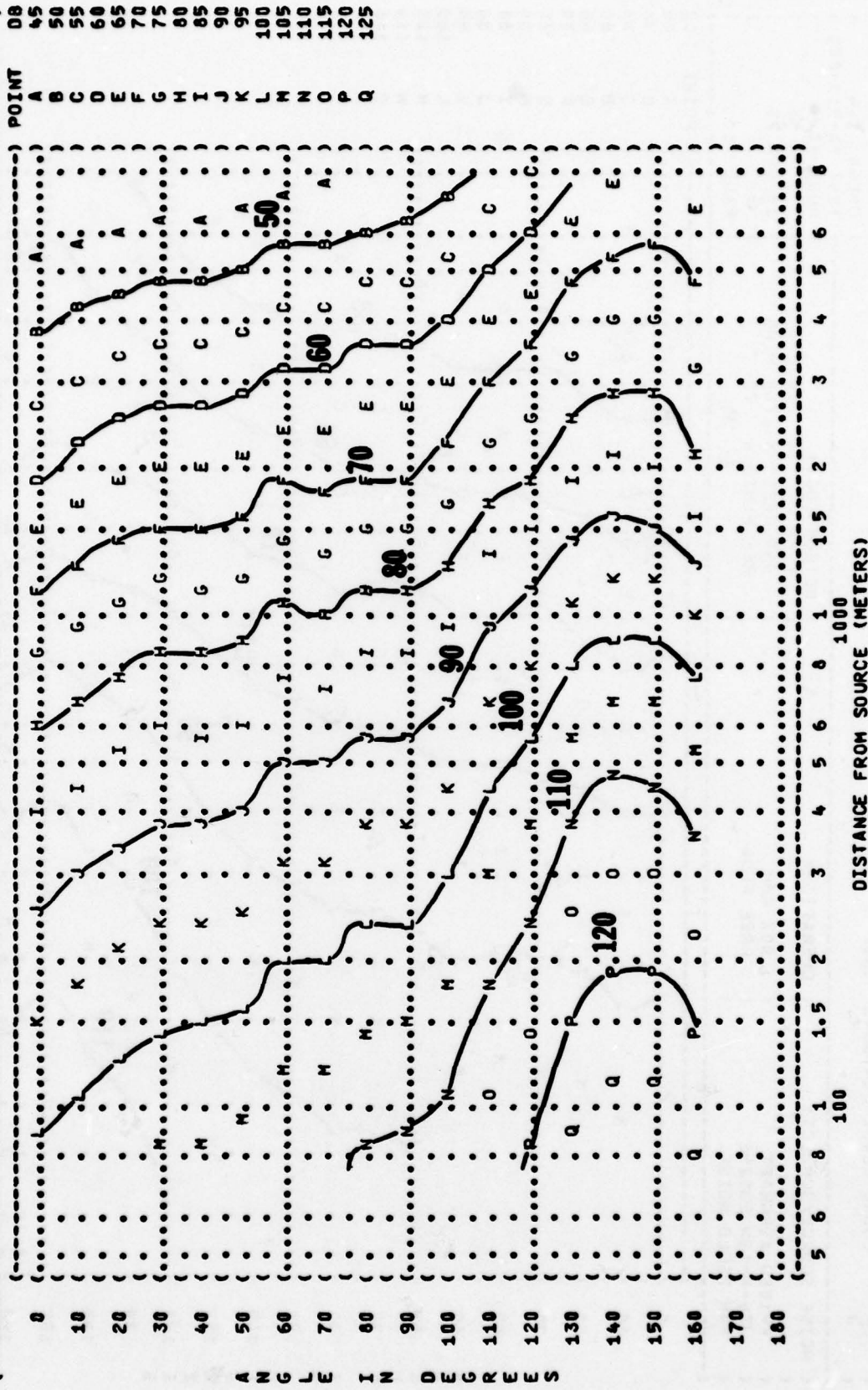
OMEGA 1-4

TEST 78-013-001

RUN 04

18 SEP 78

PAGE 13



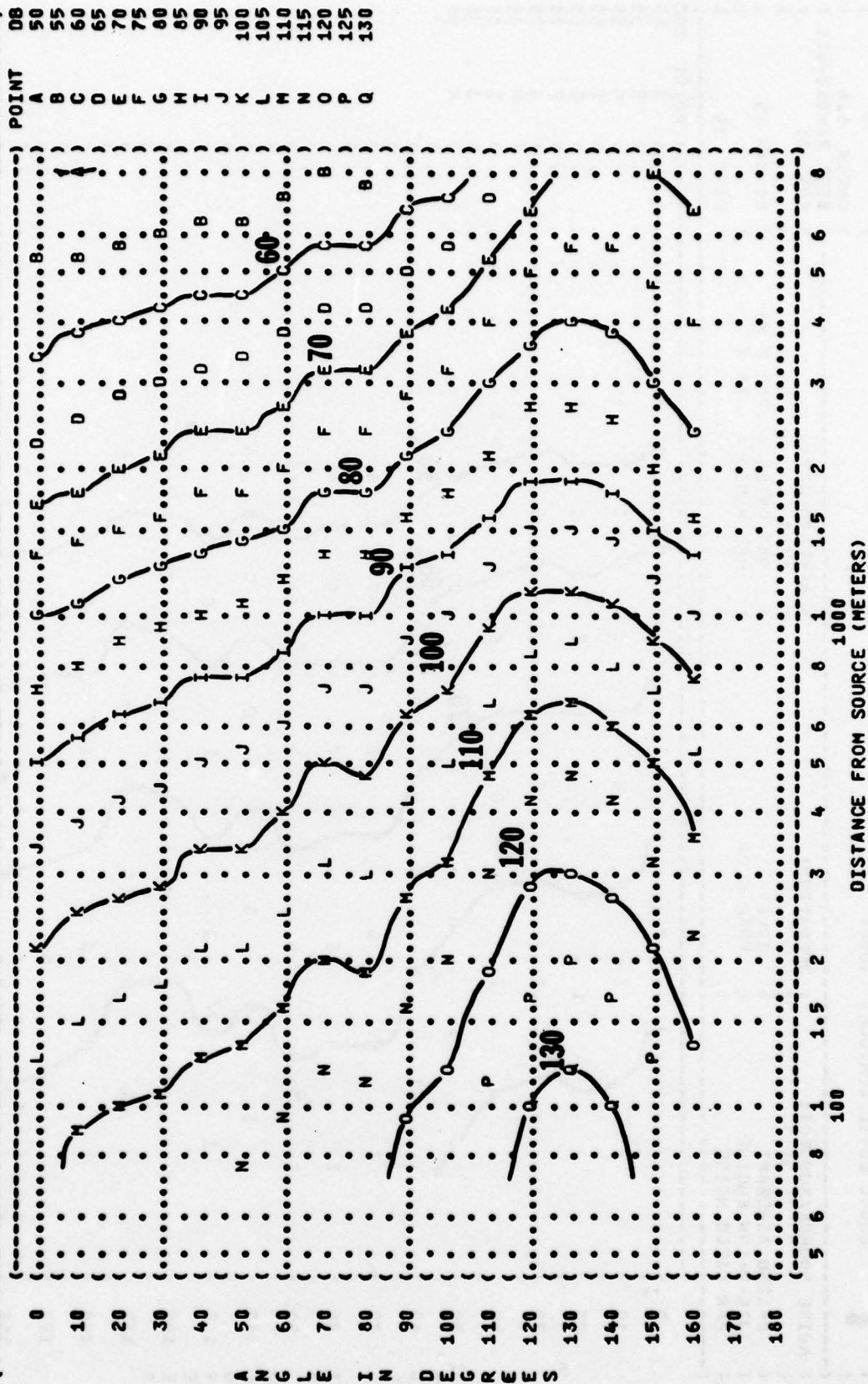
ANGLE IN DEGREES

FIGURE 1 OVERALL SOUND PRESSURE LEVEL (OASPL)  
 5  
 EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:  
 OMEGA 1.4  
 TEST 78-013-001  
 RUN 05

NOISE SOURCE/SUBJECT: ( OPERATION: ) METEOROLOGY:  
 F-1050 AIRCRAFT ( AFTERBURNER POWER ) TEMP = 15 C  
 J75-P-19W ENGINE ( FREE FLOW ) BAR PRESS = .760 M HG  
 FAR FIELD NOISE ( ) REL HUMID = 70 %

PAGE 13



(C) FIGURE 8. C-WEIGHTED OVERALL SOUND LEVEL {OASLC}  
(C) EQUAL LEVEL CONTOURS (DBC)

**NOISE SOURCE/SUBJECT:**

## OPERATIONS

## 0 METEOROLOGY:

F-1050 AIRCRAFT  
J75-P-19W ENGINE  
FAR FIELD NOISE

( IDLE  
 ( FREE FLOW  
 (

TEMP = 15 C  
BAR PRESS = .760 M HG  
REL HUMID = 70 %

## OMEGA 1.4

**TEST 78-013-001**

**RUN 01**

24 JAN 79

**PAGE 14**

420 FE IN DEGREES

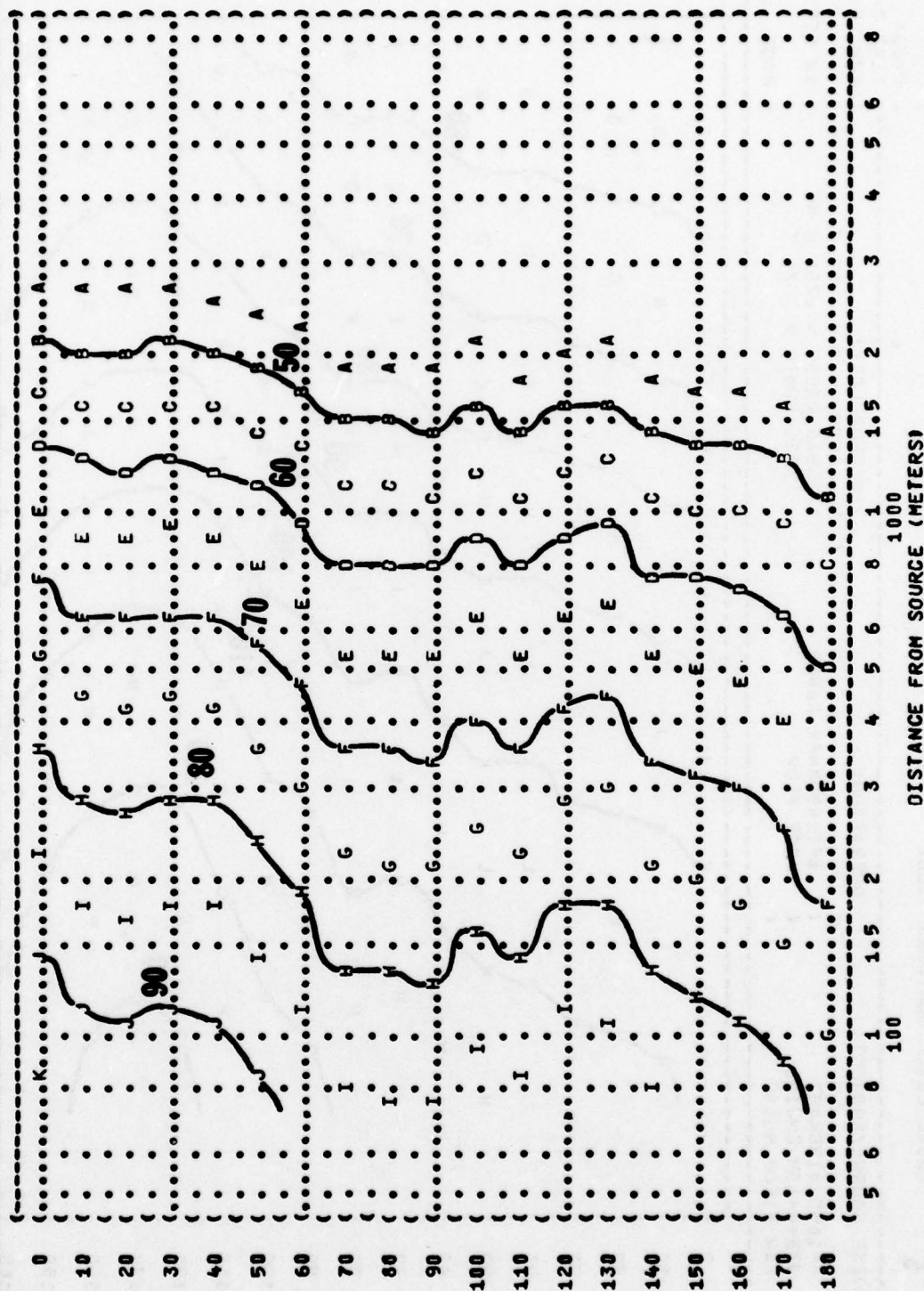
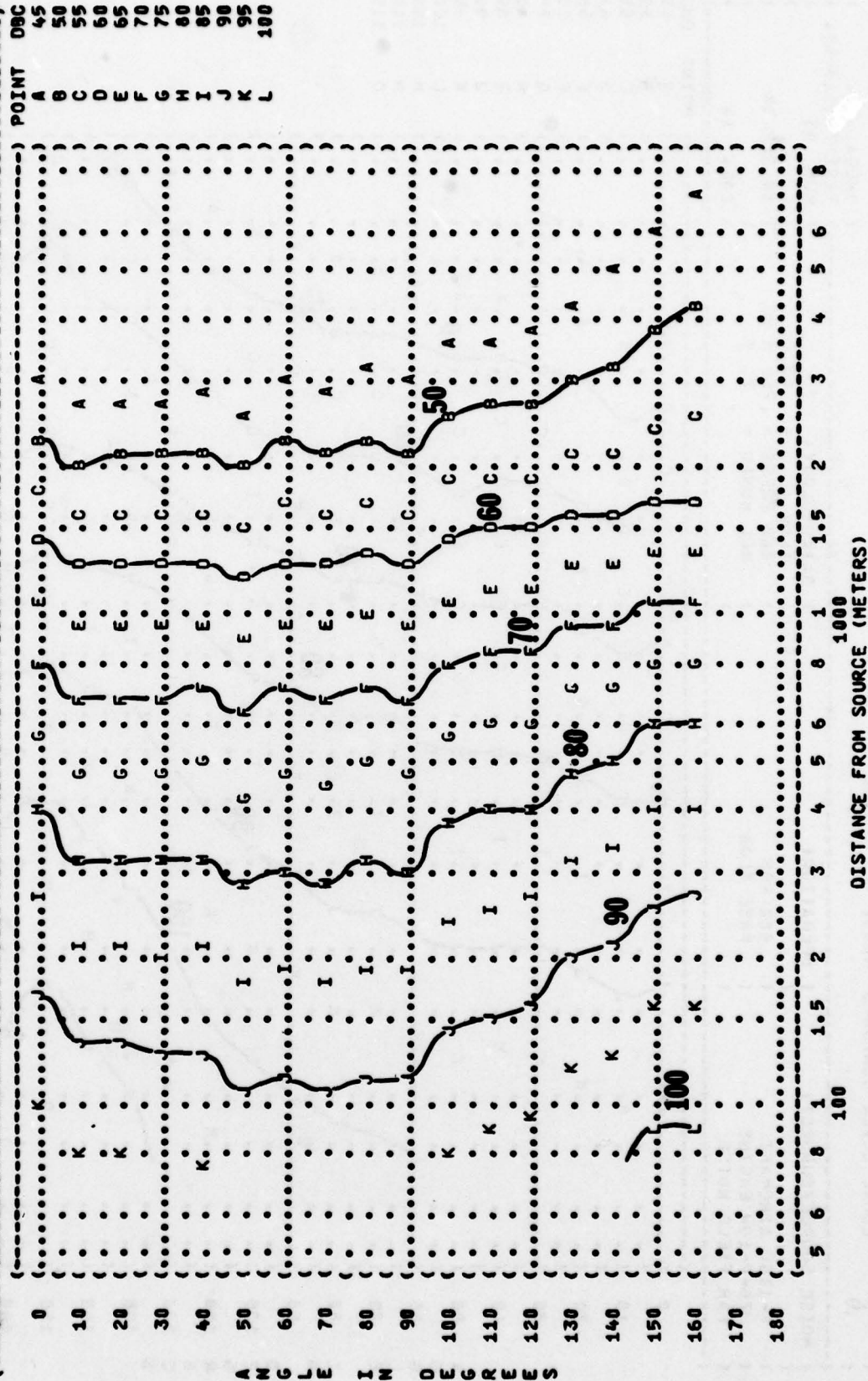


FIGURE: C-WEIGHTED OVERALL SOUND LEVEL (OASLC)  
6 EQUAL LEVEL CONTOURS (OBC)

IDENTIFICATION: )  
OMEGA 1.4 )  
TEST 78-013-001 )  
RUN 02 )  
METEOROLOGY: )  
TEMP = 15 C )  
BAR PRESS = .760 M HG )  
REL HUMID = 70 % )  
OPERATION: )  
80% RPM )  
FREE FLOW )  
NOISE SOURCE/SUBJECT: )  
F-105D AIRCRAFT )  
J75-P-19W ENGINE )  
FAR FIELD NOISE )



**IDENTIFICATION:**

**OMEGA 1.4**

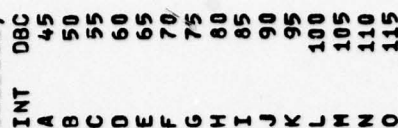
## OPERATION:

## METEOROLOGY:

TEMP = 15 C  
BAR PRESS = .760 M HG  
REL HUMID = 70 %

18 SEP 78

**PAGE 14**



420 LE HZ DEUGREWS

FIGURE: C-WEIGHTED OVERALL SOUND LEVEL (OASLC)  
6  
EQUAL LEVEL CONTOURS (DBC)

NOISE SOURCE/SUBJECT:

OPERATION:

METEOROLOGY:

OMEGA 1.4  
TEST 78-013-001  
RUN 04

F-1050 AIRCRAFT  
J75-P-19W ENGINE  
FAR FIELD NOISE

MILITARY POWER  
FREE FLOW

TEMP = 15 C  
BAR PRESS = .760 M HG  
REL HUMID = 70 %

PAGE 14

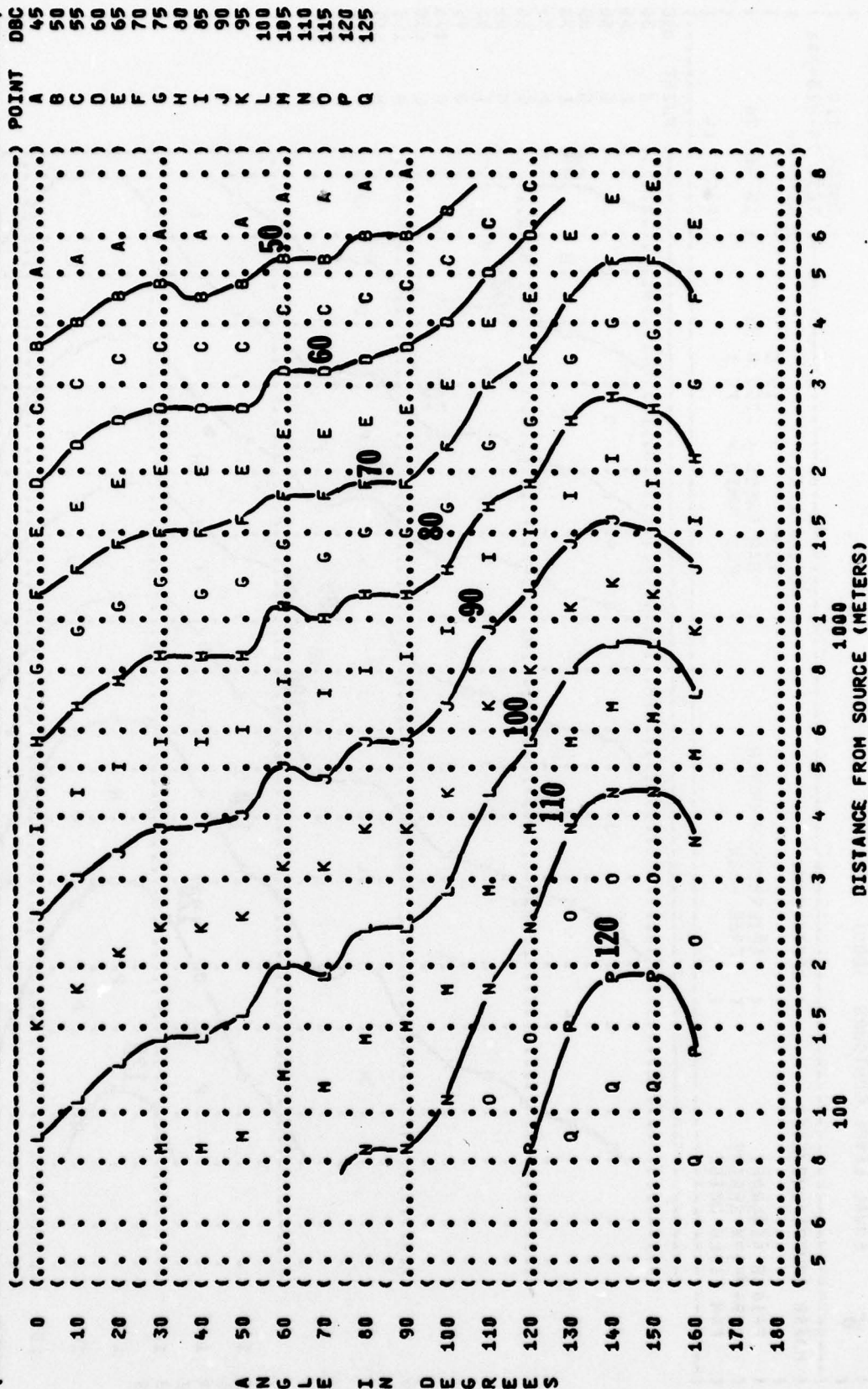
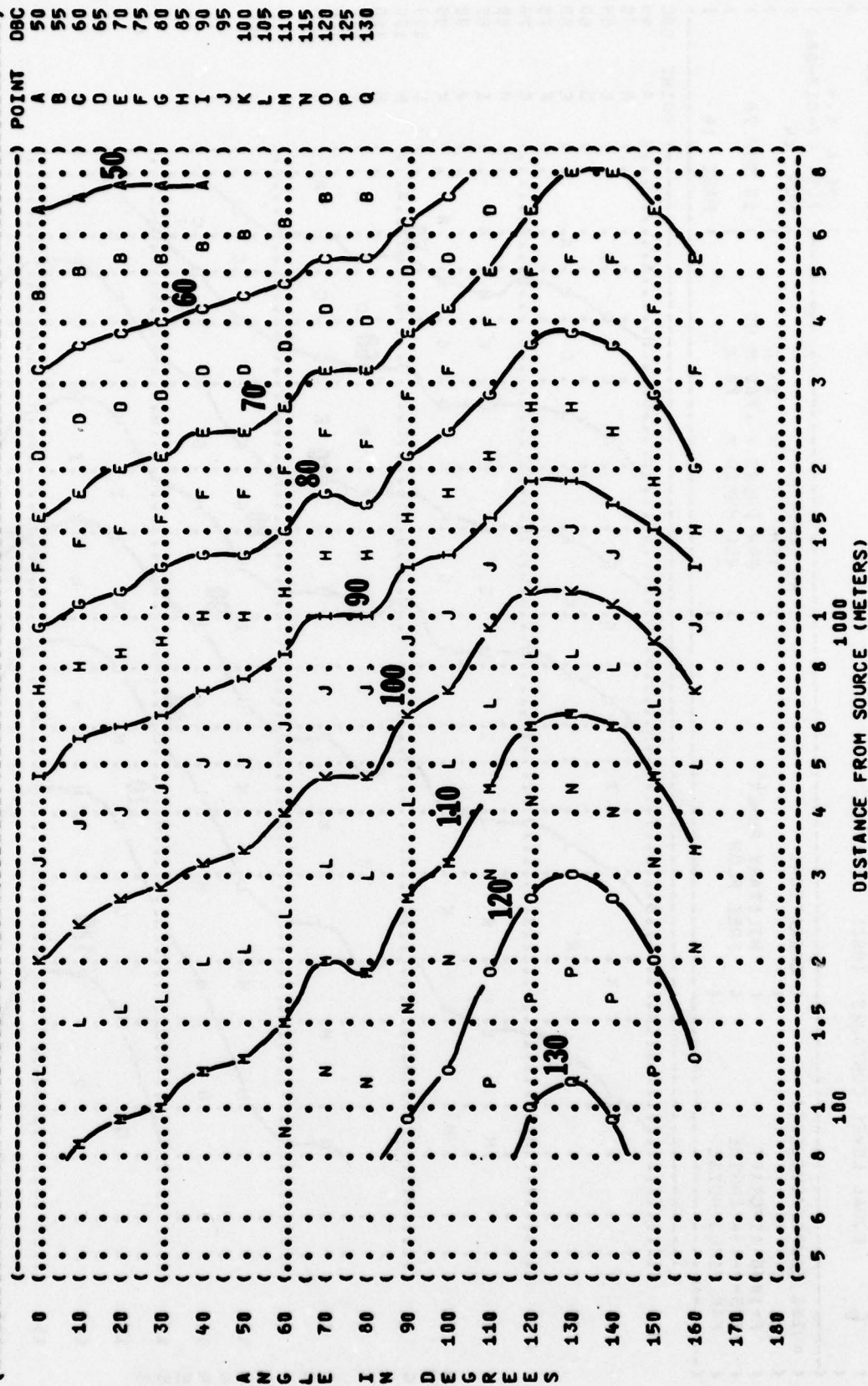


FIGURE 6 C-WEIGHTED OVERALL SOUND LEVEL (OASLC)  
EQUAL LEVEL CONTOURS (DBC)

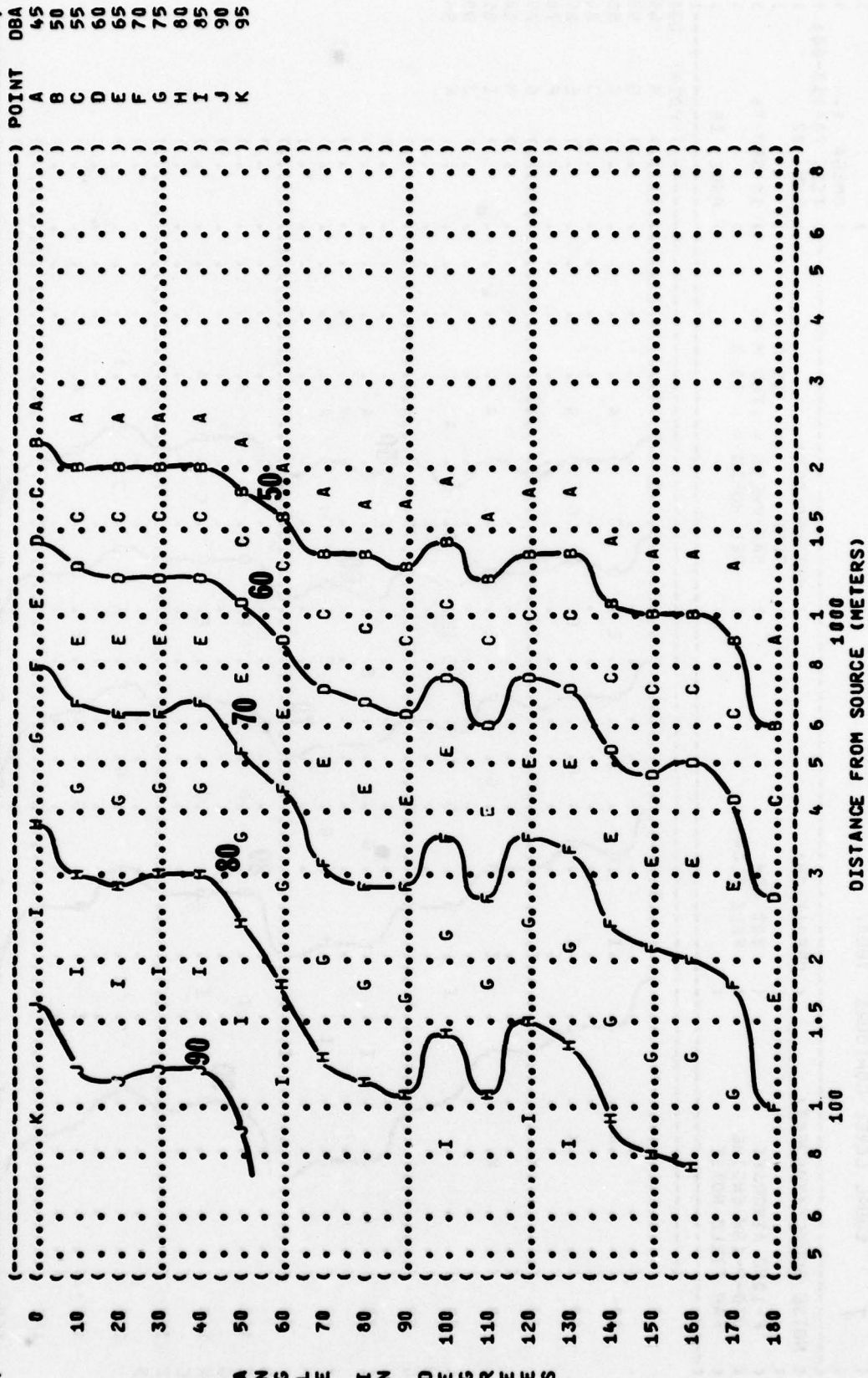
IDENTIFICATION: )  
OMEGA 1.4 )  
TEST 78-013-001 )  
RUN 05 )  
18 SEP 78 )  
PAGE 14 )

NOISE SOURCE/SUBJECT: ( OPERATION: )  
F-105D AIRCRAFT ( )  
J75-P-19W ENGINE ( )  
FAR FIELD NOISE ( )

METEOROLOGY: )  
TEMP = 15 C )  
BAR PRESS = .760 M HG )  
REL HUMID = 70 % )

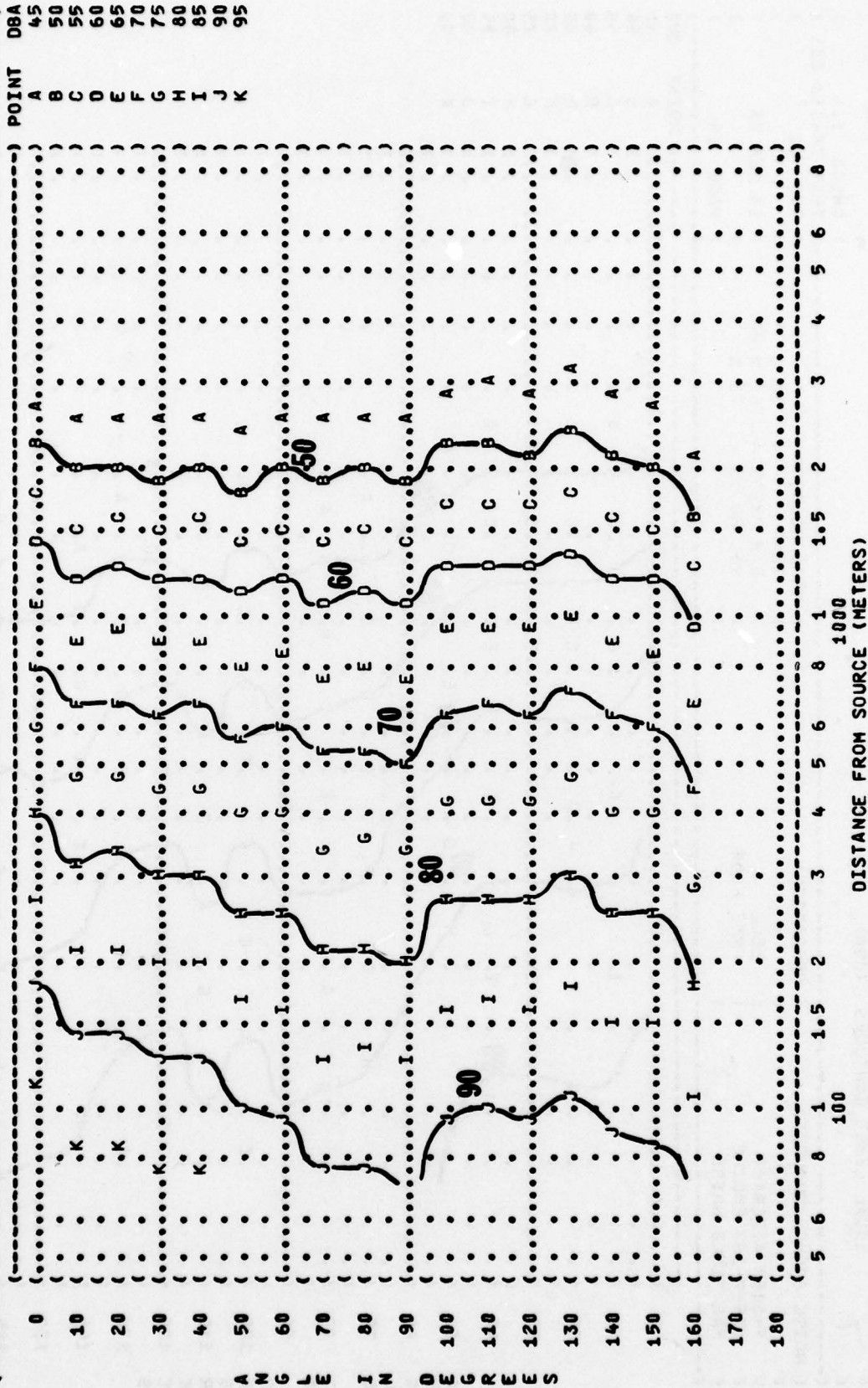


( FIGURE: A-WEIGHTED OVERALL SOUND LEVEL (OASLA)  
 ( 7  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( F-1050 AIRCRAFT ( IDLE FLOW  
 ( J75-P-19W ENGINE ( FREE FLOW  
 ( FAR FIELD NOISE ( )  
 ( ) METEOROLOGY:  
 ( ) TEMP = 15 C  
 ( ) BAR PRESS = .760 M HG  
 ( ) REL HUMID = 70 %  
 ( ) 18 SEP 78  
 ( ) PAGE 15  
 ( ) IDENTIFICATION:  
 ( ) OMEGA 1.4  
 ( ) TEST 78-013-001  
 ( ) RUN 01



A N G L E I N D E G R E E S

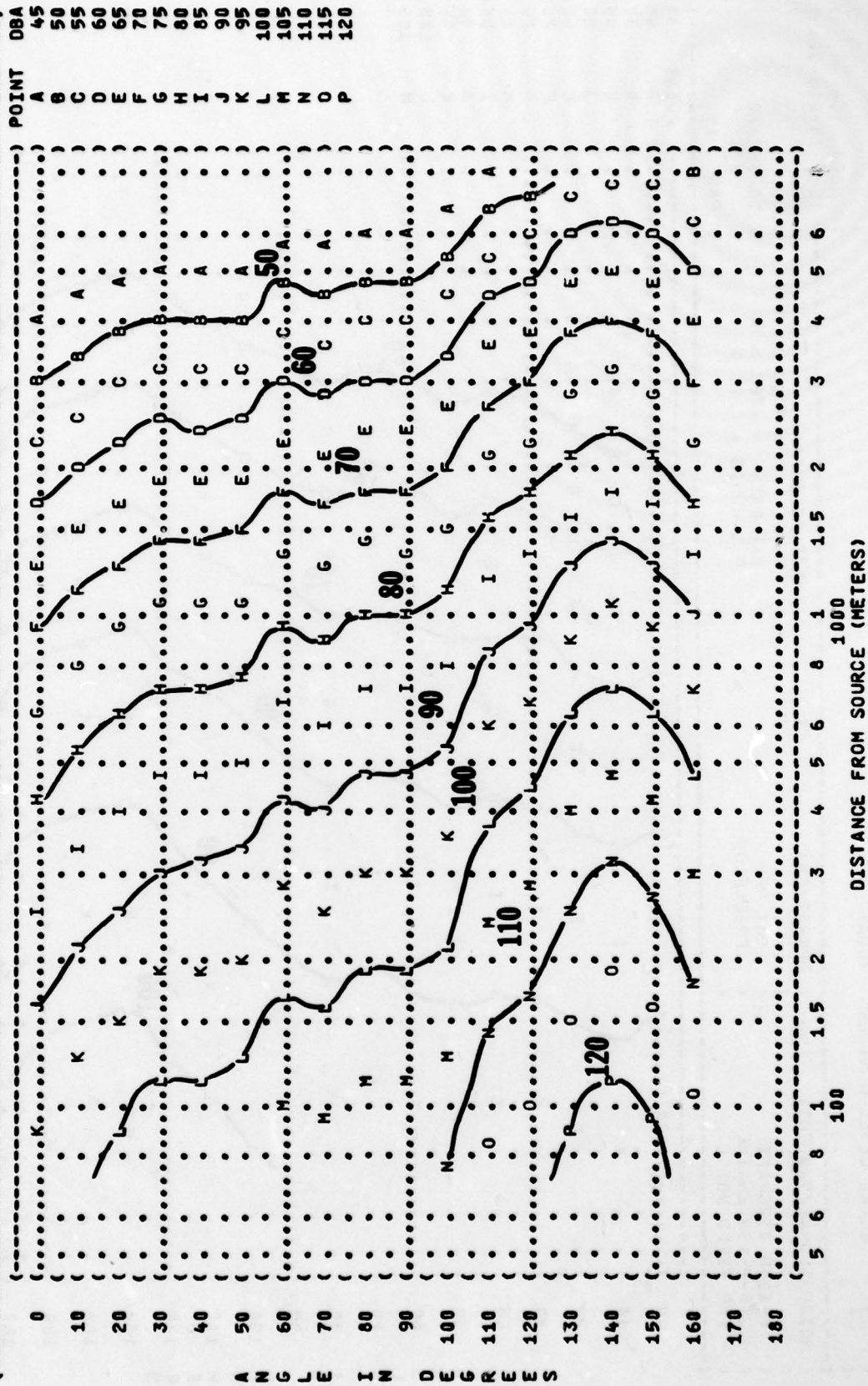
( FIGURE: A-WEIGHTED OVERALL SOUND LEVEL (OASLA)  
 ( 7  
 ( EQUAL LEVEL CONTOURS (DBA)  
 ( ) IDENTIFICATION: )  
 ( ) OMEGA 1.4  
 ( ) TEST 78-013-001  
 ( ) RUN 02  
 ( )  
 ( NOISE SOURCE/SUBJECT: )  
 ( ) OPERATION: )  
 ( )  
 ( ) F-105D AIRCRAFT )  
 ( ) J75-P-19N ENGINE )  
 ( ) FAR FIELD NOISE )  
 ( )  
 ( ) METEOROLOGY: )  
 ( ) TEMP = 15 C )  
 ( ) BAR PRESS = .760 M HG )  
 ( ) REL HUMID = 70 % )  
 ( )  
 ( ) 18 SEP 78 )  
 ( ) PAGE 15 )



A N G L E I N D E G R E E S



( FIGURE: A-WEIGHTED OVERALL SOUND LEVEL (OASLA)  
 ( 7  
 ( EQUAL LEVEL CONTOURS (DBA)  
 ( ) IDENTIFICATION:  
 ( ) OMEGA 1.4  
 ( ) TEST 78-013-001  
 ( ) RUN 04  
 ( ) NOISE SOURCE/SUBJECT:  
 ( ) OPERATION:  
 ( ) F-1050 AIRCRAFT  
 ( ) J75-P-19M ENGINE  
 ( ) FAR FIELD NOISE  
 ( ) METEOROLOGY:  
 ( ) TEMP = 15 C  
 ( ) BAR PRESS = .760 M HG  
 ( ) REL HUMID = 70 %  
 ( ) 18 SEP 78  
 ( ) PAGE 15



A N G L E I N D E G R E E S

) RUN 05  
 )  
 ) 24 JAN 79  
 )  
 ) PAGE 15  
 )

) RUN 05  
 )  
 ) 24 JAN 79  
 )  
 ) PAGE 15  
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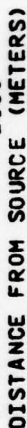
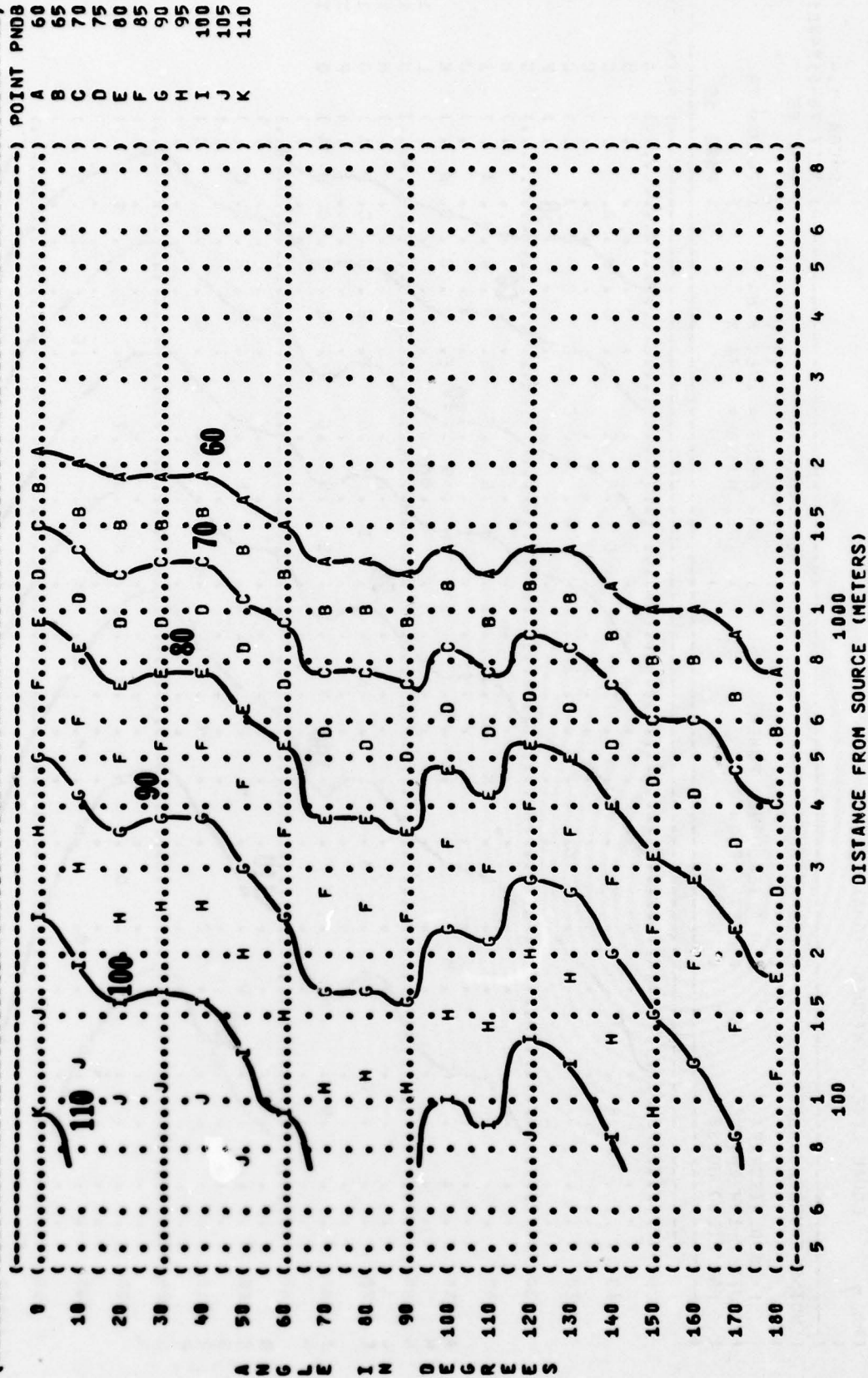


FIGURE:	PERCEIVED NOISE LEVEL WITH SMOOTH TONE CORRECTION (PNLT)	IDENTIFICATION:
8	EQUAL LEVEL CONTOURS (PNDB)	
		OMEGA 1.4
		TEST 78-013-001
		RUN 01
NOISE SOURCE/SUBJECT:	OPERATION:	METEOROLOGY:
F-1050 AIRCRAFT	IDLE	TEMP = 15 C
J75-P-19W ENGINE	FREE FLOW	BAR PRESS = .760 M HG
FAR FIELD NOISE		REL HUMID = 70 %
		PAGE 16





( FIGURE: PERCEIVED NOISE LEVEL WITH SMOOTH TONE CORRECTION (PNLT)  
 ( 8  
 ( ) IDENTIFICATION:  
 ( )  
 ( ) OMEGA 1.4  
 ( ) TEST 78-013-001  
 ( ) RUN 03  
 ( )  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( )  
 ( ) METEOROLOGY:  
 ( ) TEMP = 15 C  
 ( ) F-105D AIRCRAFT ( 90% RPM  
 ( ) J75-P-19M ENGINE ( FREE FLOW  
 ( ) FAR FIELD NOISE ( )  
 ( ) BAR PRESS = .760 M HG  
 ( ) REL HUMID = 70 %  
 ( )  
 ( ) PAGE 16  
 ( )

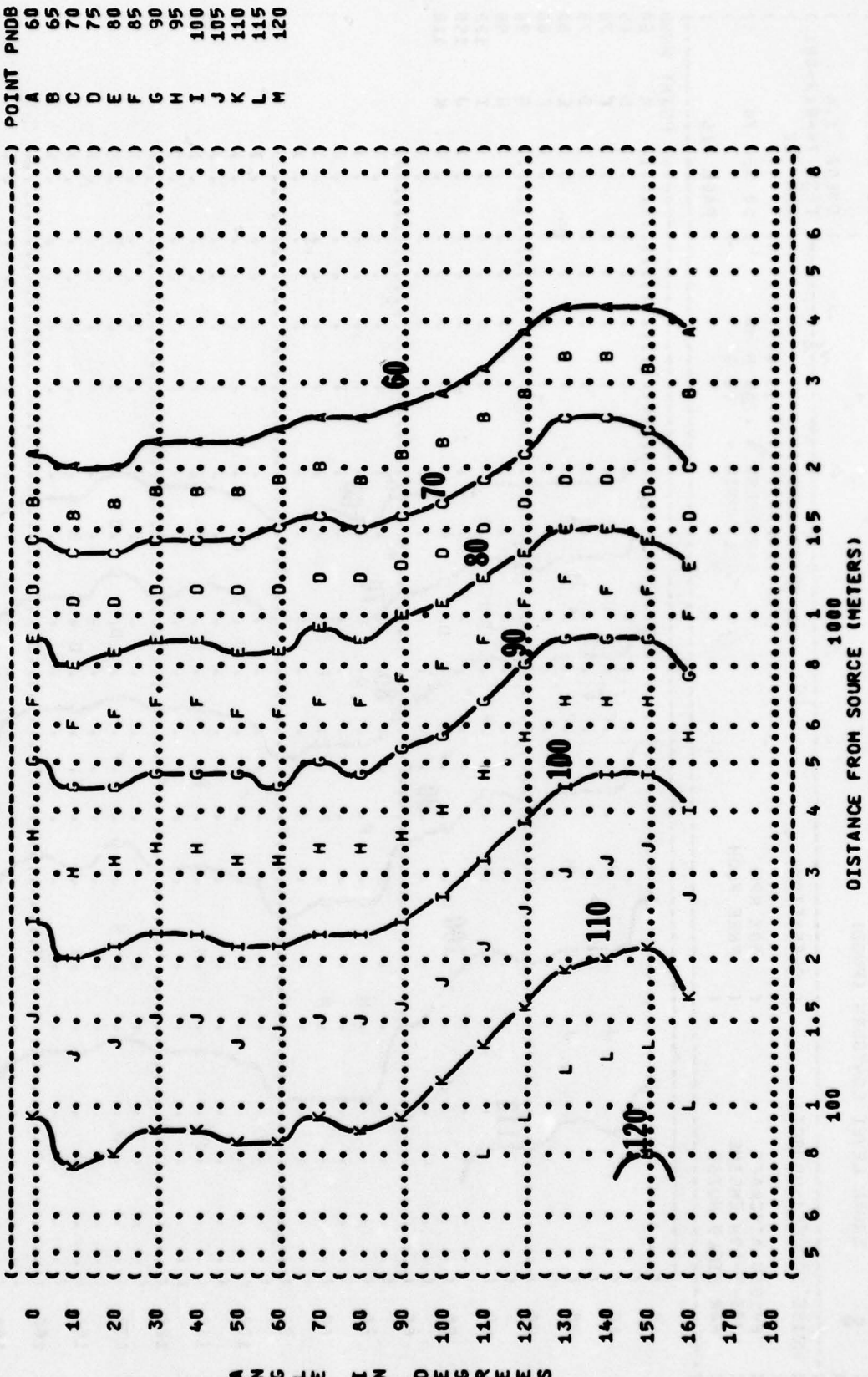
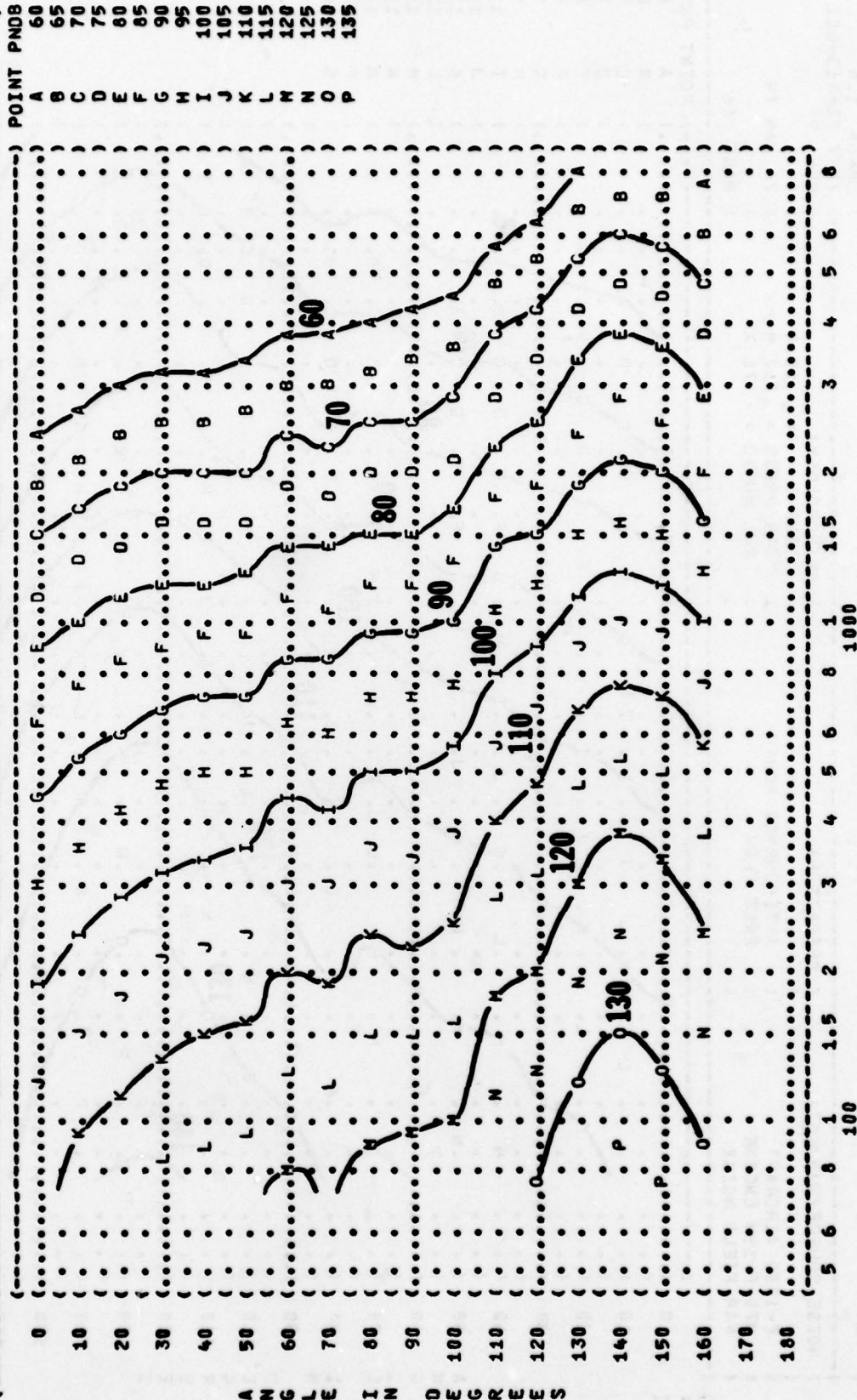


FIGURE: PERCEIVED NOISE LEVEL WITH SMOOTH TONE CORRECTION (PNLT)  
 8  
 IDENTIFICATION:  
 OMEGA 1.4  
 TEST 78-013-001  
 RUN 04  
 NOISE SOURCE/SUBJECT: ( OPERATION: ) METEOROLOGY: )  
 F-1050 AIRCRAFT ( MILITARY POWER ) TEMP = 15 C  
 J75-P-19W ENGINE ( FREE FLOW ) BAR PRESS = .760 M HG  
 FAR FIELD NOISE ( ) REL HUMID = 70 %  
 PAGE 16



IDENTIFICATION: )  
)

OMEGA 1.4 )

) METEOROLOGY:

BAR PRESS = .760 M HG

REL HUMID = 70 %



IDENTIFICATION:

OMEGA 1.4  
TEST 30-01

) METEOROLOGY:

TEMP = 15 C  
BAR PRESS = .760 M HG  
REL HUMID = 70 %

## POINT

ALL INFORMATION CONTAINED  
HEREIN IS UNCLASSIFIED

DISTANCE FROM SOURCE (METERS)

FIGURE: PREFERRED SPEECH INTERFERENCE LEVEL (PSIL)  
EQUAL LEVEL CONTOURS (DB)

9

NOISE SOURCE/SUBJECT:

( OPERATION:

) METEOROLOGY:

( F-1050 AIRCRAFT  
( J75-P-19M ENGINE  
( FAR FIELD NOISE

( 80% RPM  
( FREE FLOW

TEMP = 15 C  
BAR PRESS = .760 M HG  
REL HUMID = 70 %

OMEGA 1.4

TEST 78-013-001

RUN 02

16 SEP 78

PAGE 17



( FIGURE: 9 ) PREFERRED SPEECH INTERFERENCE LEVEL (PSIL)  
 ( ) EQUAL LEVEL CONTOURS (DB)  
 ( ) IDENTIFICATION:  
 ( ) OMEGA 1.4  
 ( ) TEST 78-013-001  
 ( ) RUN 03  
 ( ) METEOROLOGY:  
 ( ) TEMP = 15 C  
 ( ) BAR PRESS = .760 M HG  
 ( ) REL HUMID = 70 %  
 ( ) OPERATION:  
 ( ) 90% RPM  
 ( ) FREE FLOW  
 ( ) NOISE SOURCE/SUBJECT:  
 ( ) F-105D AIRCRAFT  
 ( ) J75-P-19M ENGINE  
 ( ) FAR FIELD NOISE  
 ( ) PAGE 17

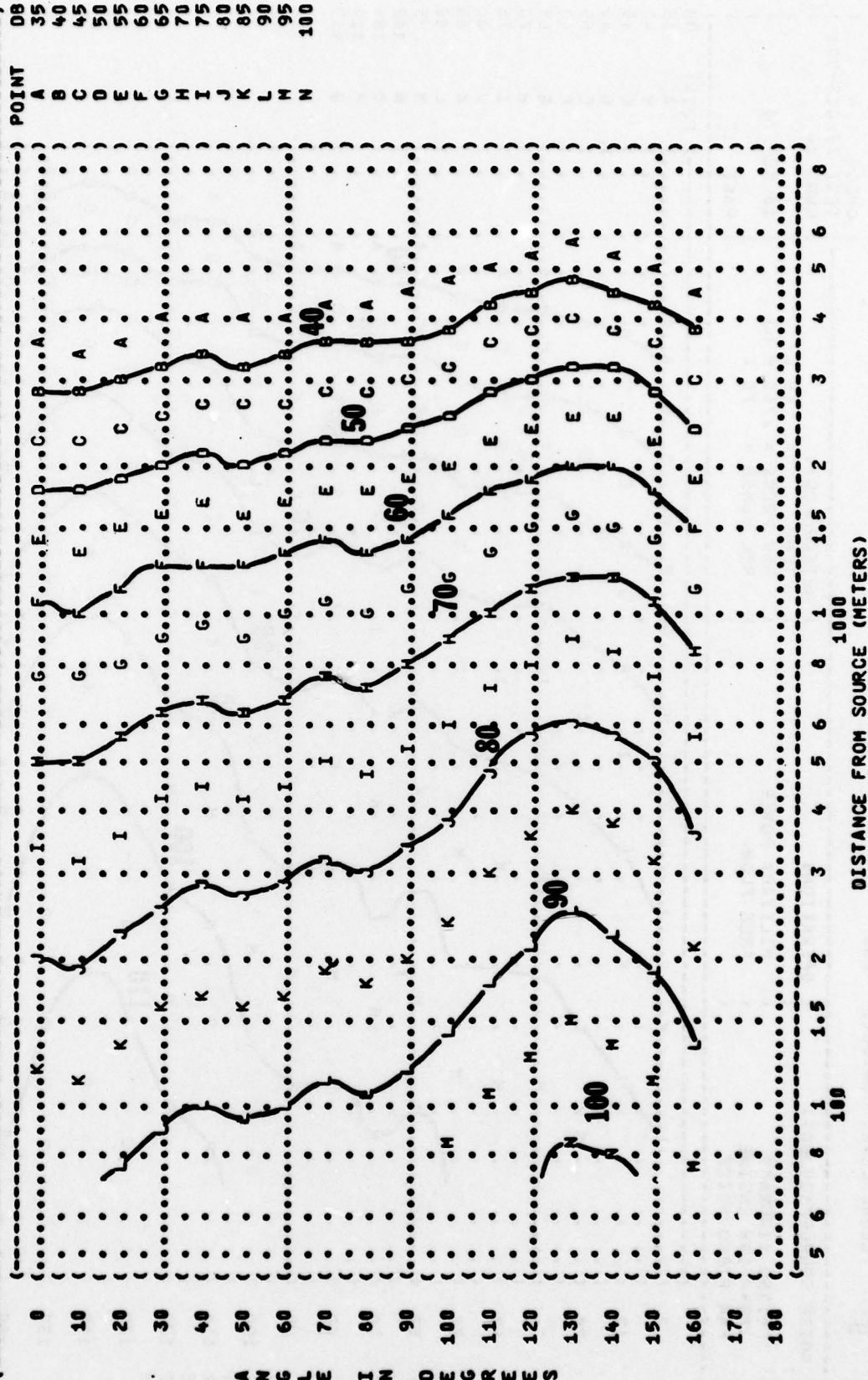
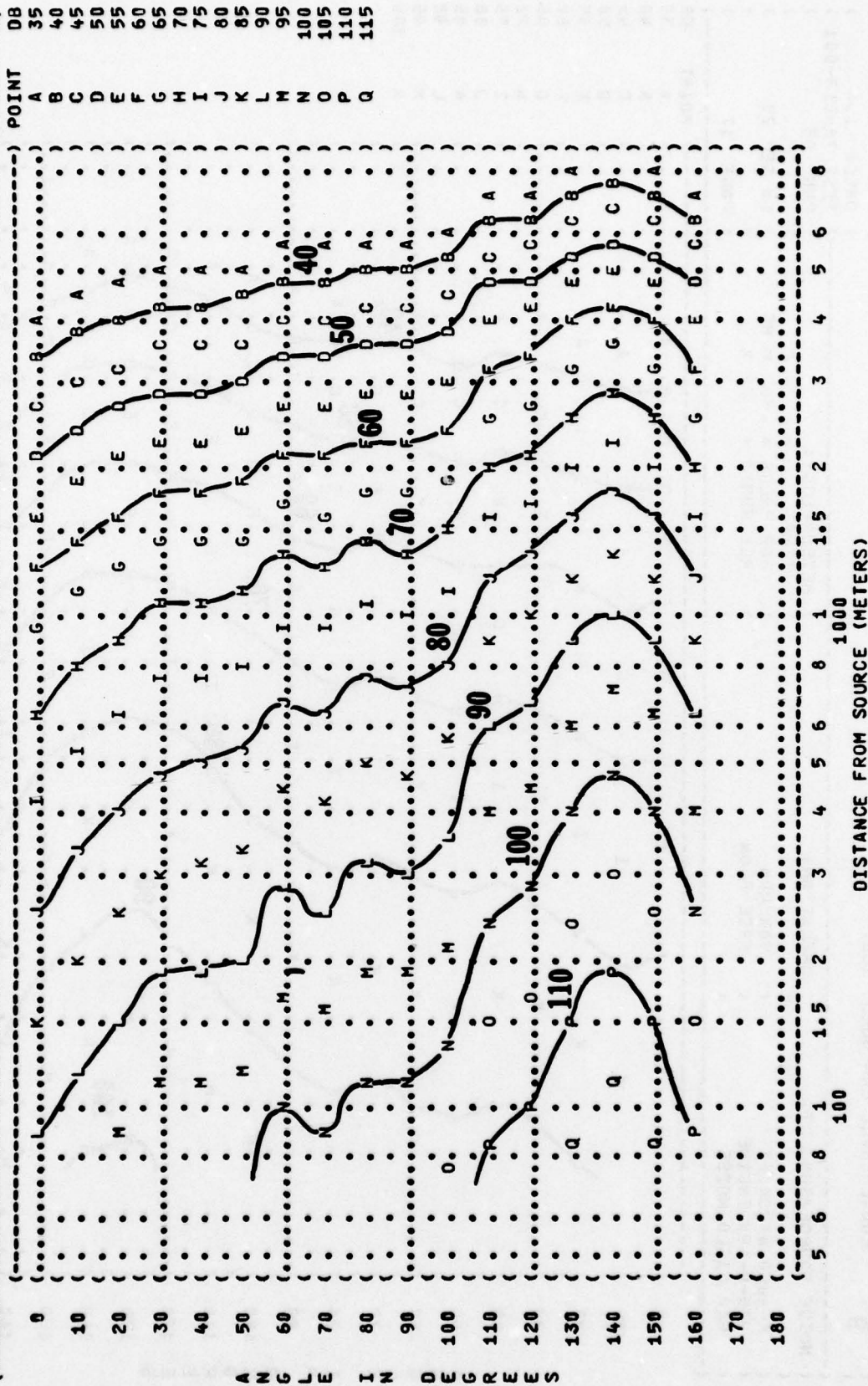


FIGURE: PREFERRED SPEECH INTERFERENCE LEVEL (PSIL)  
EQUAL LEVEL CONTOURS (DB)

9

NOISE SOURCE/SUBJECT: ( OPERATION: ) METEOROLOGY: )  
 F-105D AIRCRAFT ( MILITARY POWER ) TEMP = 15 C )  
 J75-P-19N ENGINE ( FREE FLOW ) BAR PRESS = .760 M HG )  
 FAR FIELD NOISE ( ) REL HUMID = 70 % )

IDENTIFICATION: )  
 OMEGA 1.4 )  
 TEST 78-013-001 )  
 RUN 04 )  
 18 SEP 78 )  
 PAGE 17 )



IDENTIFICATION: ;

OMEGA 1.4 )  
TEST 78-013-001 )

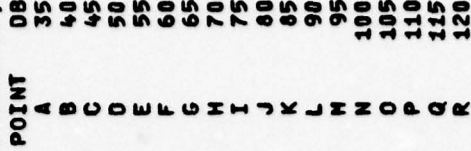
## 1) METEOROLOGY:

TEMP = 15 C

0 18 SEP 78

REL HUMID = 70 %

**PAGE 17**





(-----) ) IDENTIFICATION: )  
 ( FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73) )  
 ( 10 )  
 (-----) )  
 ( NOISE SOURCE/SUBJECT: )  
 ( F-1050 AIRCRAFT )  
 ( J75-P-19W ENGINE )  
 ( FAR FIELD NOISE )  
 (-----) )  
 ( OPERATION: )  
 ( IDLE )  
 ( FREE FLOW )  
 (-----) )  
 ( METEOROLOGY: )  
 ( TEMP = 15 C )  
 ( BAR PRESS = .760 M HG )  
 ( REL HUMID = 70 % )  
 (-----) )  
 ( OMEGA 1.4 )  
 ( TEST 78-013-001 )  
 ( RUN 01 )  
 ( 18 SEP 78 )  
 ( PAGE 8 )

0<  
 10<  
 20<  
 30<  
 40<  
 50<  
 60<  
 70<  
 80<  
 90<  
 100<  
 110<  
 120<  
 130<  
 140<  
 150<  
 160<  
 170<  
 180<

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 S

PERSONNEL MAY BE EXPOSED UP TO 960 MINUTES PER DAY  
 AT ALL DISTANCES FROM SOURCE EQUAL TO OR GREATER THAN 75 METERS  
 FOR ALL ANGLES EVALUATED (INDICATED BY < AT LEFT)  
 UNDER THE FOLLOWING EAR PROTECTION CONDITIONS:

MINIMUM QPL EAR MUFFS  
 AMERICAN OPTICAL 1700 EAR MUFFS  
 V-51R EAR PLUGS  
 COMFIT TRIPLE FLANGE EAR PLUGS  
 H-133 GROUND COMMUNICATION UNIT

5 6 8 1 1.5 2 3 4 5 6 8 100  
 100  
 DISTANCE FROM SOURCE (METERS)

FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)

IDENTIFICATION:

10 EQUAL TIME CONTOURS (MINUTES)

NO PROTECTION

NOISE SOURCE/SUBJECT: ( OPERATION: ) METEOROLOGY: ( )

( ) TEMP = 15 C

( F-1050 AIRCRAFT ) 80% RPM

( J75-P-19W ENGINE ) FREE FLOW

( FAR FIELD NOISE )

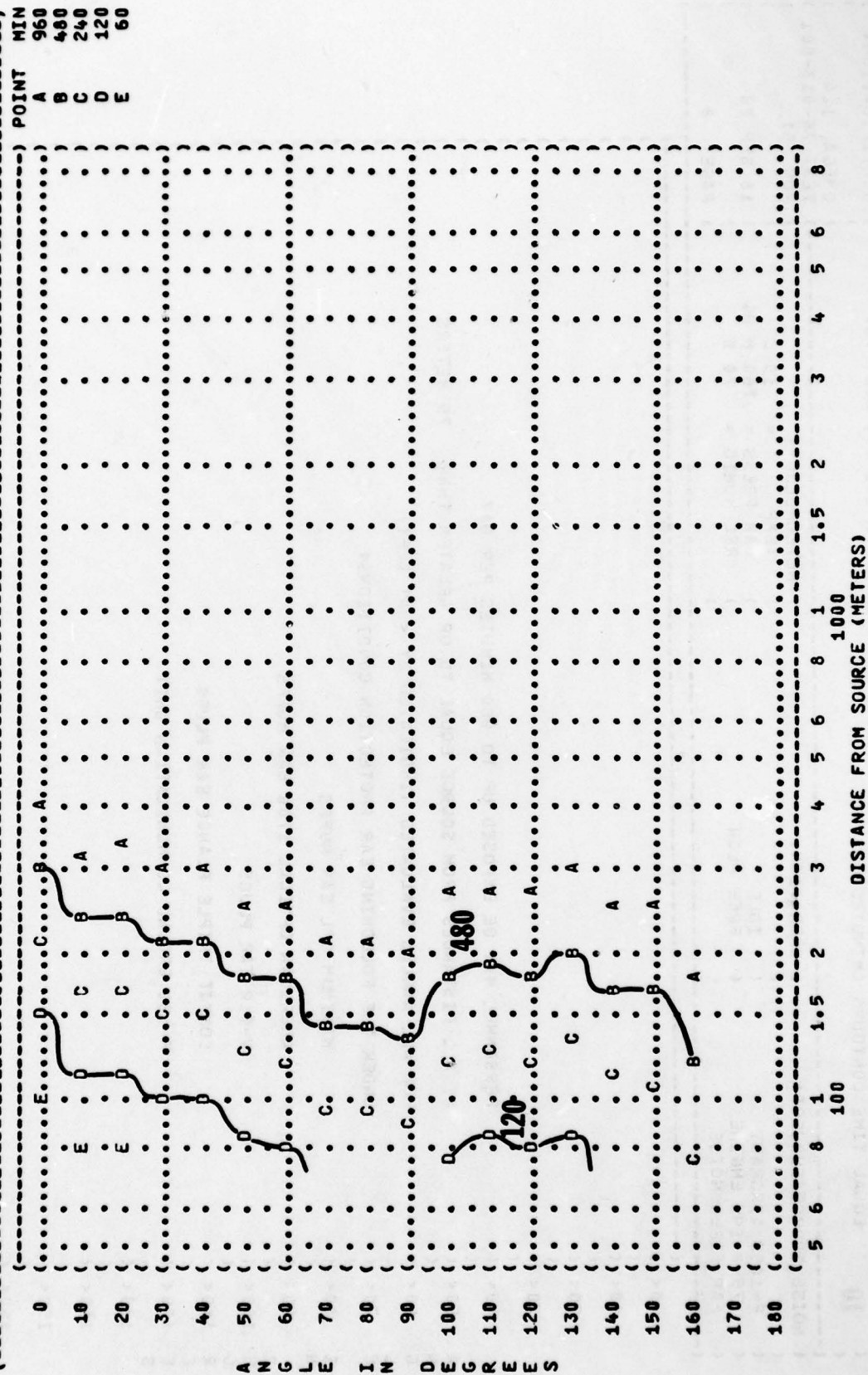
OMEGA 1.4

TEST 78-013-001

RUN 02

18 SEP 78

PAGE 7



A N G L E I N D E G R E E S

FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)

10

IDENTIFICATION:

OMEGA 1.4

TEST 78-013-001

RUN 02

18 SEP 78

PAGE 8

NOISE SOURCE/SUBJECT: ( OPERATIONS: ) METEOROLOGY: )

( ( 80% RPM ) TEMP = 15 C

( ( FREE FLOW ) BAR PRESS = .760 M HG

( ( FAR FIELD NOISE ) REL HUMID = 70 %

PERSONNEL MAY BE EXPOSED UP TO 960 MINUTES PER DAY

AT ALL DISTANCES FROM SOURCE EQUAL TO OR GREATER THAN 75 METERS

FOR ALL ANGLES EVALUATED (INDICATED BY < AT LEFT)

UNDER THE FOLLOWING EAR PROTECTION CONDITIONS:

MINIMUM QPL EAR MUFFS

AMERICAN OPTICAL 1700 EAR MUFFS

V-51R EAR PLUGS

CONFIT TRIPLE FLANGE EAR PLUGS

H-133 GROUND COMMUNICATION UNIT

5 6 8 1 1.5 2 3 4 5 6 8

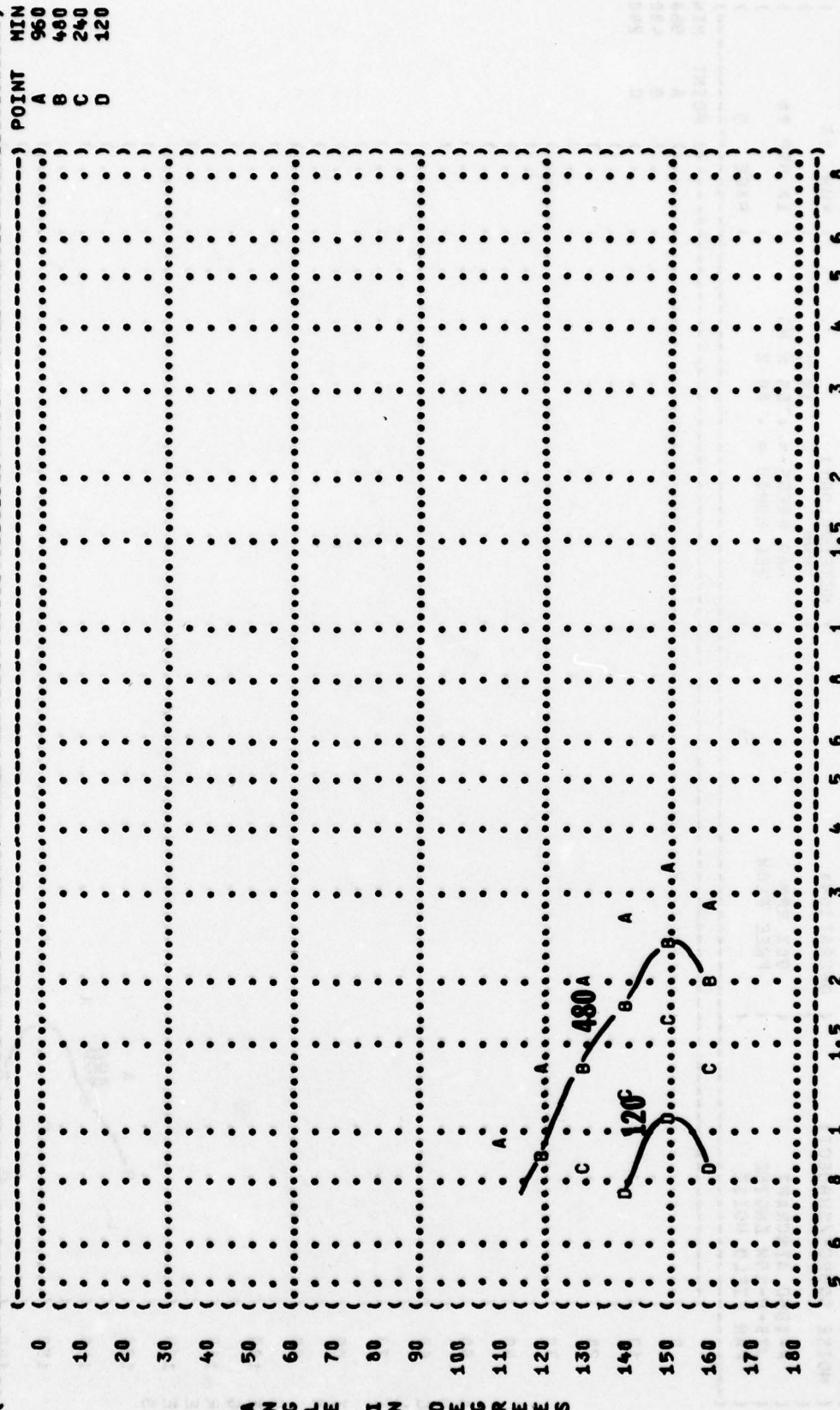
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1000

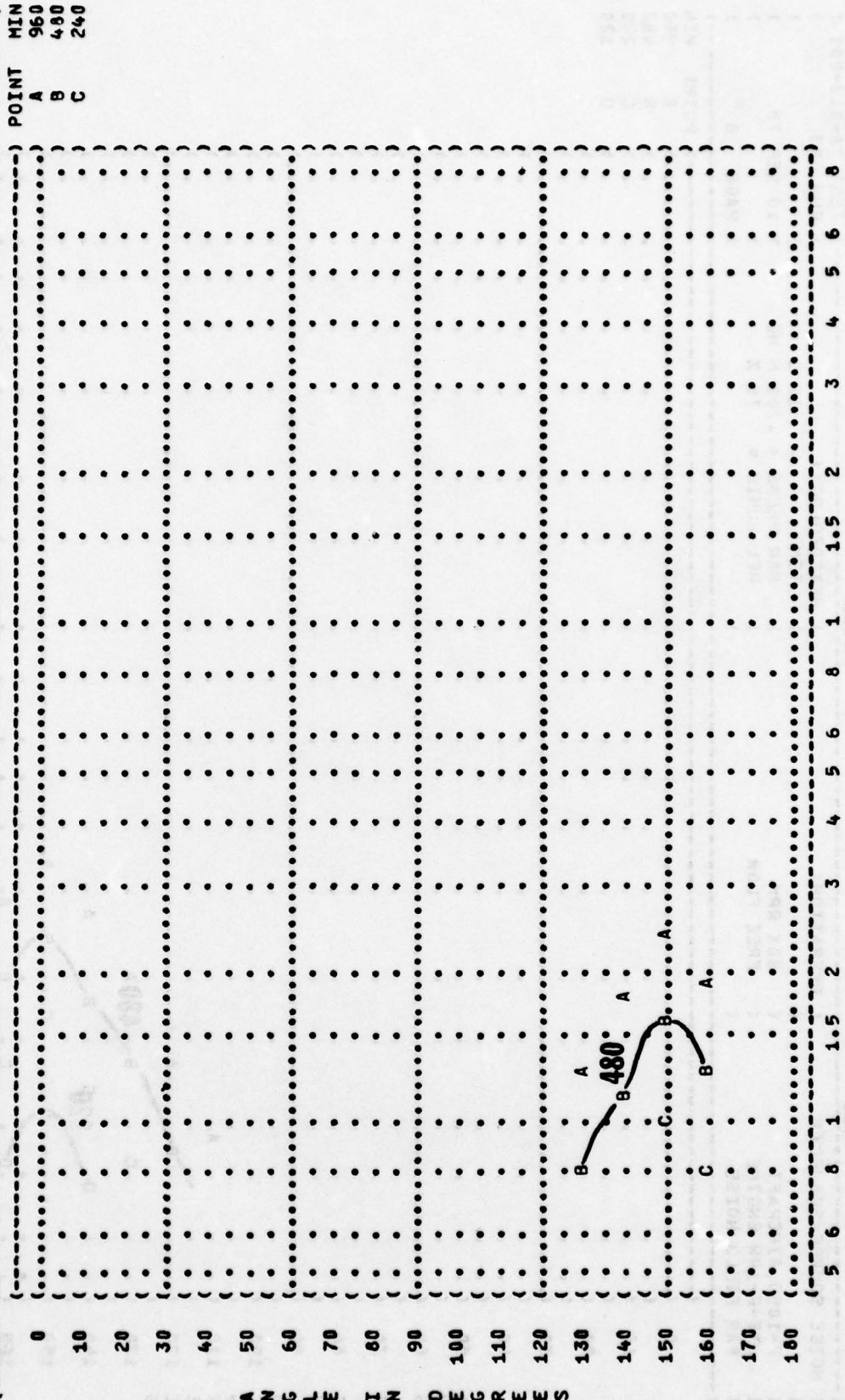
DISTANCE FROM SOURCE (METERS)



( ) FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73) ) IDENTIFICATION: )  
 ( ) 10 EQUAL TIME CONTOURS (MINUTES) ) OMEGA 1.4 )  
 ( ) MINIMUM QPL EAR MUFFS ) TEST 78-013-001 )  
 ( ) NOISE SOURCE/SUBJECT: ( ) OPERATION: ( ) METEOROLOGY: ( ) RUN 03 )  
 ( ) F-1050 AIRCRAFT ( ) TEMP = 15 C )  
 ( ) J75-P-19W ENGINE ( ) 90% RPM )  
 ( ) FAR FIELD NOISE ( ) FREE FLOW )  
 ( ) BAR PRESS = .760 M HG )  
 ( ) REL HUMID = 70 % )  
 ( ) 18 SEP 78 )  
 ( ) PAGE 8 )



( FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73) ) IDENTIFICATION: )  
 ( 10 EQUAL TIME CONTOURS (MINUTES) ) )  
 ( AMERICAN OPTICAL 1700 EAR MUFFS ) OMEGA 1.4  
 ( ) TEST 78-013-001 )  
 ( NOISE SOURCE/SUBJECT: ) OPERATION: ) METEOROLOGY: )  
 ( ) ) TEMP = 15 C )  
 ( F-1050 AIRCRAFT ) 90% RPM ) BAR PRESS = .760 M HG ) 18 SEP 78 )  
 ( J75-P-19W ENGINE ) FREE FLOW ) REL HUMID = 70 % ) )  
 ( FAR FIELD NOISE ) ) ) PAGE 9 )

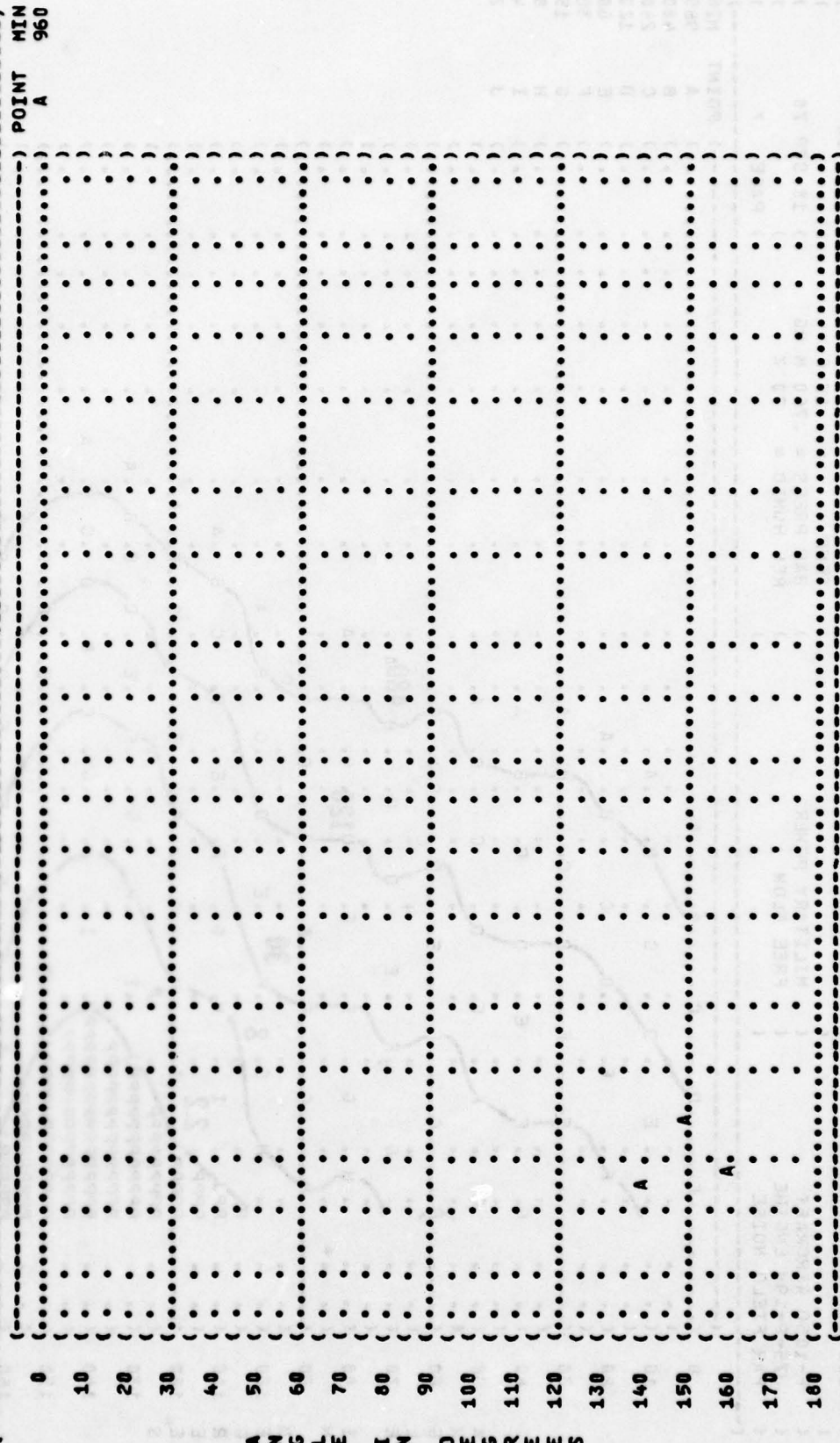


A N G L E I N D E G R E E S



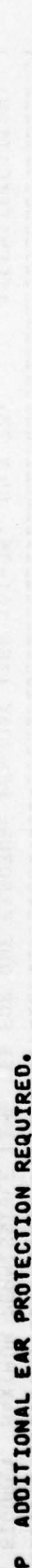


( FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73) ) IDENTIFICATION: )  
 ( 10 EQUAL TIME CONTOURS (MINUTES) ) )  
 ( H-133 GROUND COMMUNICATION UNIT ) OMEGA 1.4  
 ( ) TEST 78-013-001  
 ( NOISE SOURCE/SUBJECT: ) METEOROLOGY: ) RUN 03  
 ( ) )  
 ( F-1050 AIRCRAFT ) TEMP = 15 C )  
 ( J75-P-19W ENGINE ) BAR PRESS = .760 M HG ) 18 SEP 78  
 ( FAR FIELD NOISE ) REL HUMID = 70 % )  
 ( ) )  
 ( ) ) PAGE 12 )



DISTANCE FROM SOURCE (METERS)

POINT	MIN
960	0
480	10
240	20
120	30
60	40
30	
15	
8	
4	
2.2	

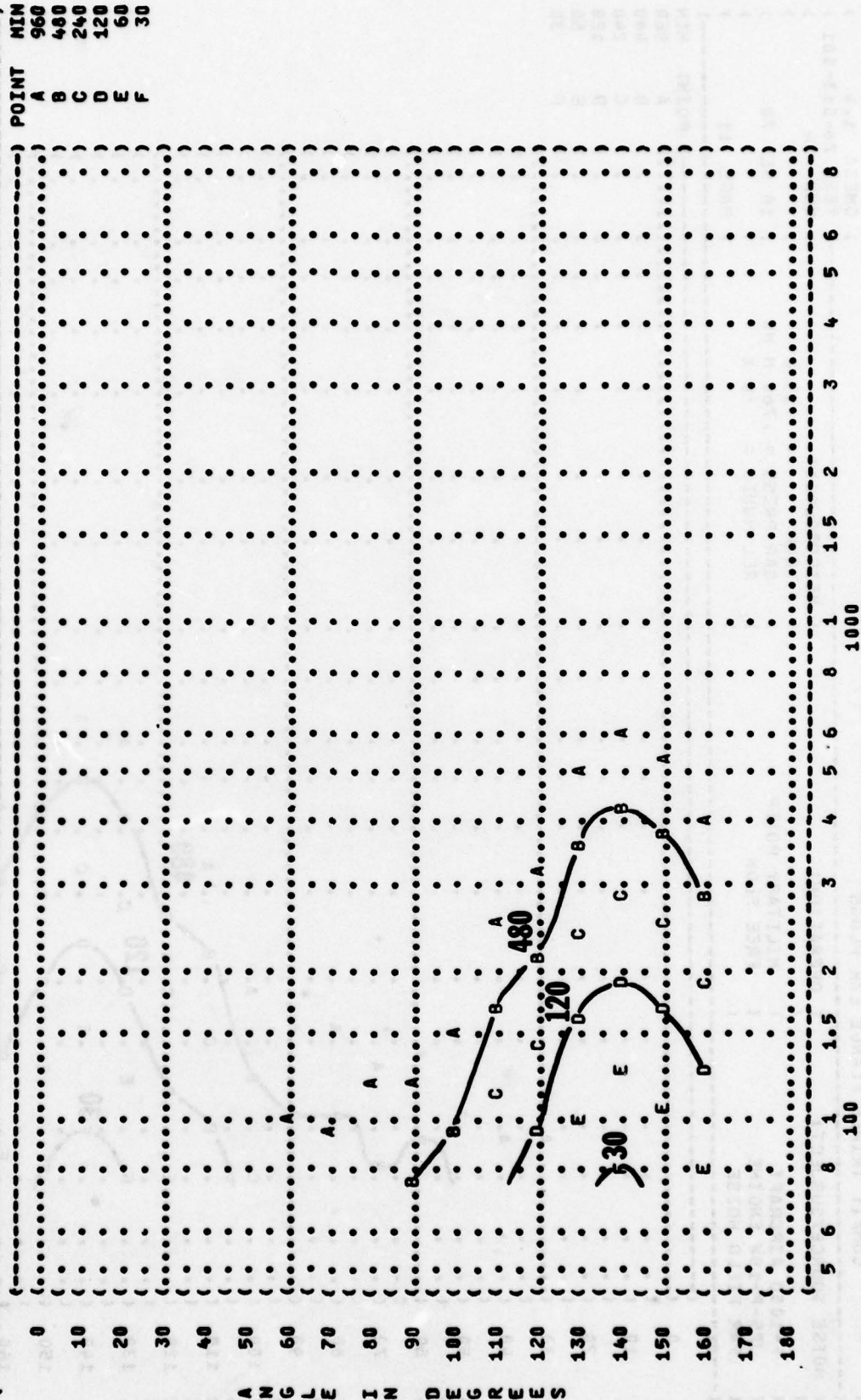


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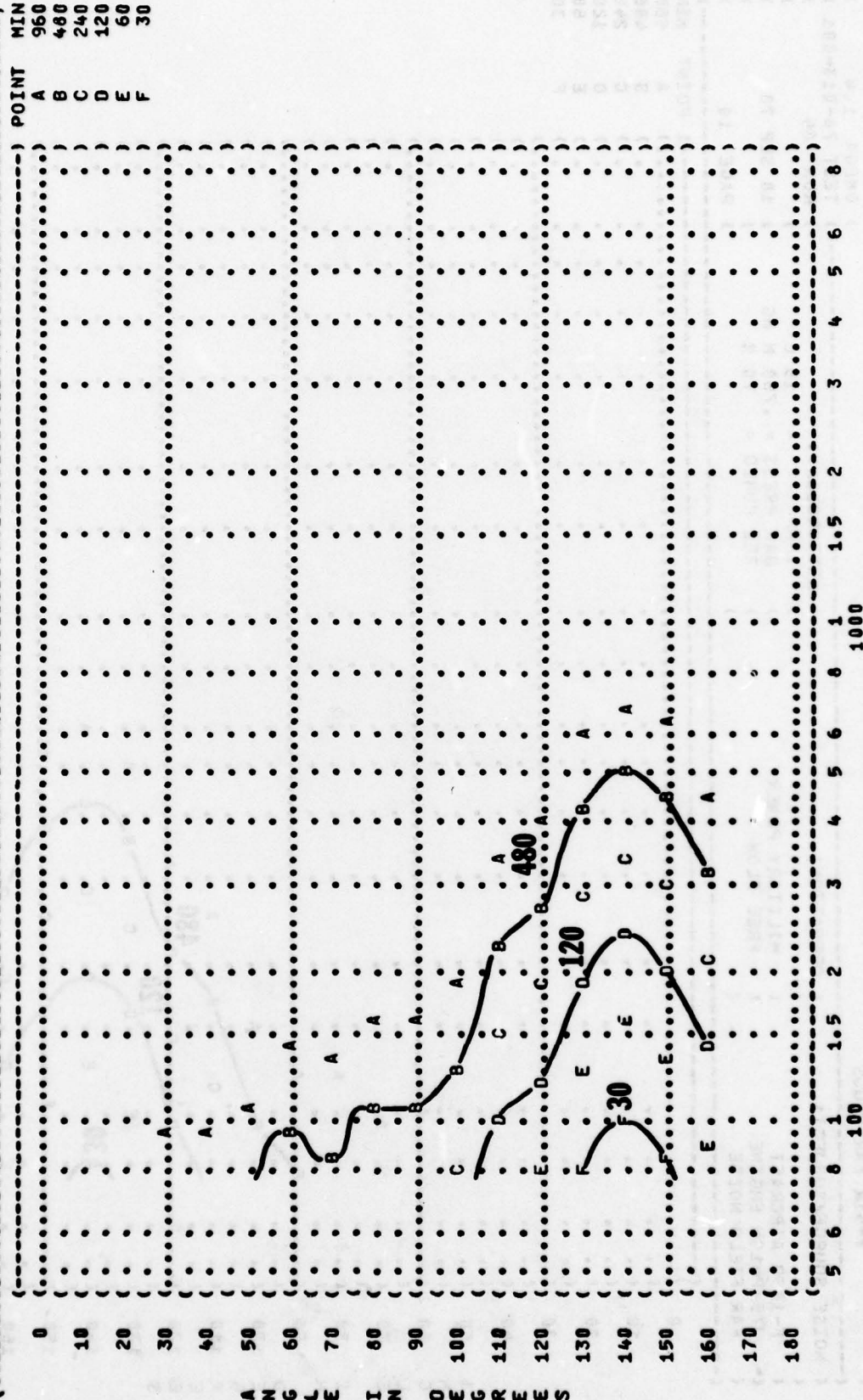




( FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73) ) IDENTIFICATION: )  
 ( 10 EQUAL TIME CONTOURS (MINUTES) ) )  
 ( V-51R EAR PLUGS ) )  
 ( NOISE SOURCE/SUBJECT: ) OPERATION: ) METEOROLOGY: )  
 ( F-1050 AIRCRAFT ) ) TEMP = 15 C )  
 ( J75-P-19W ENGINE ) ) MILITARY POWER ) BAR PRESS = .760 M HG )  
 ( FAR FIELD NOISE ) ) FREE FLOW ) REL HUMID = 70 % )  
 ( ) ) ) 10 SEP 70 )  
 ( ) ) ) PAGE 10 )



( FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73) ) IDENTIFICATION: )  
 ( 10 EQUAL TIME CONTOURS (MINUTES) ) )  
 ( COMFIT TRIPLE FLANGE EAR PLUGS ) )  
 ( NOISE SOURCE/SUBJECT: ) OPERATION: ) METEOROLOGY: )  
 ( F-1050 AIRCRAFT ) ) TEMP = 15 C )  
 ( J75-P-19W ENGINE ) ) MILITARY POWER ) BAR PRESS = .760 M HG )  
 ( FAR FIELD NOISE ) ) FREE FLOW ) REL HUMID = 70 % )  
 ( ) ) ) 18 SEP 78 )  
 ( ) ) ) PAGE 11 )



( ( FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73) ) IDENTIFICATION: )  
 ( ( 10 EQUAL TIME CONTOURS (MINUTES) ) )  
 ( ( H-133 GROUND COMMUNICATION UNIT ) )  
 ( ( NOISE SOURCE/SUBJECT: ) OPERATION: ) METEOROLOGY: )  
 ( ( F-1050 AIRCRAFT ) ) TEMP = 15 C )  
 ( ( J75-P-19N ENGINE ) ) MILITARY POWER ) BAR PRESS = .760 H MG )  
 ( ( FAR FIELD NOISE ) ) FREE FLOW ) REL HUMID = 70 % )  
 ( ( ) ) ) 18 SEP 78 )  
 ( ( ) ) ) PAGE 12 )  
 ( ( ) ) ) POINT MIN )

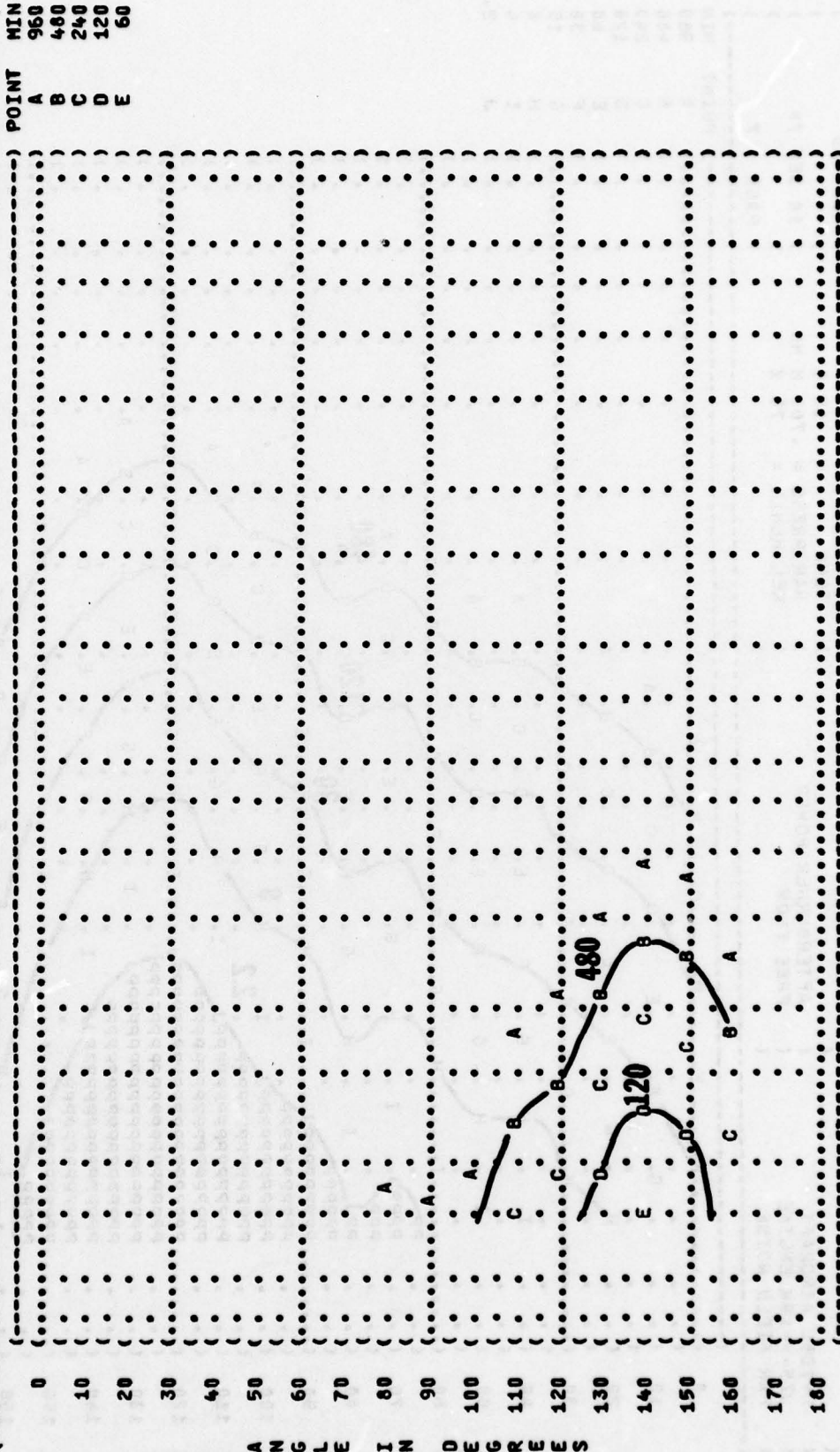
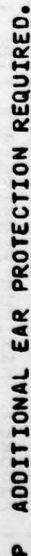
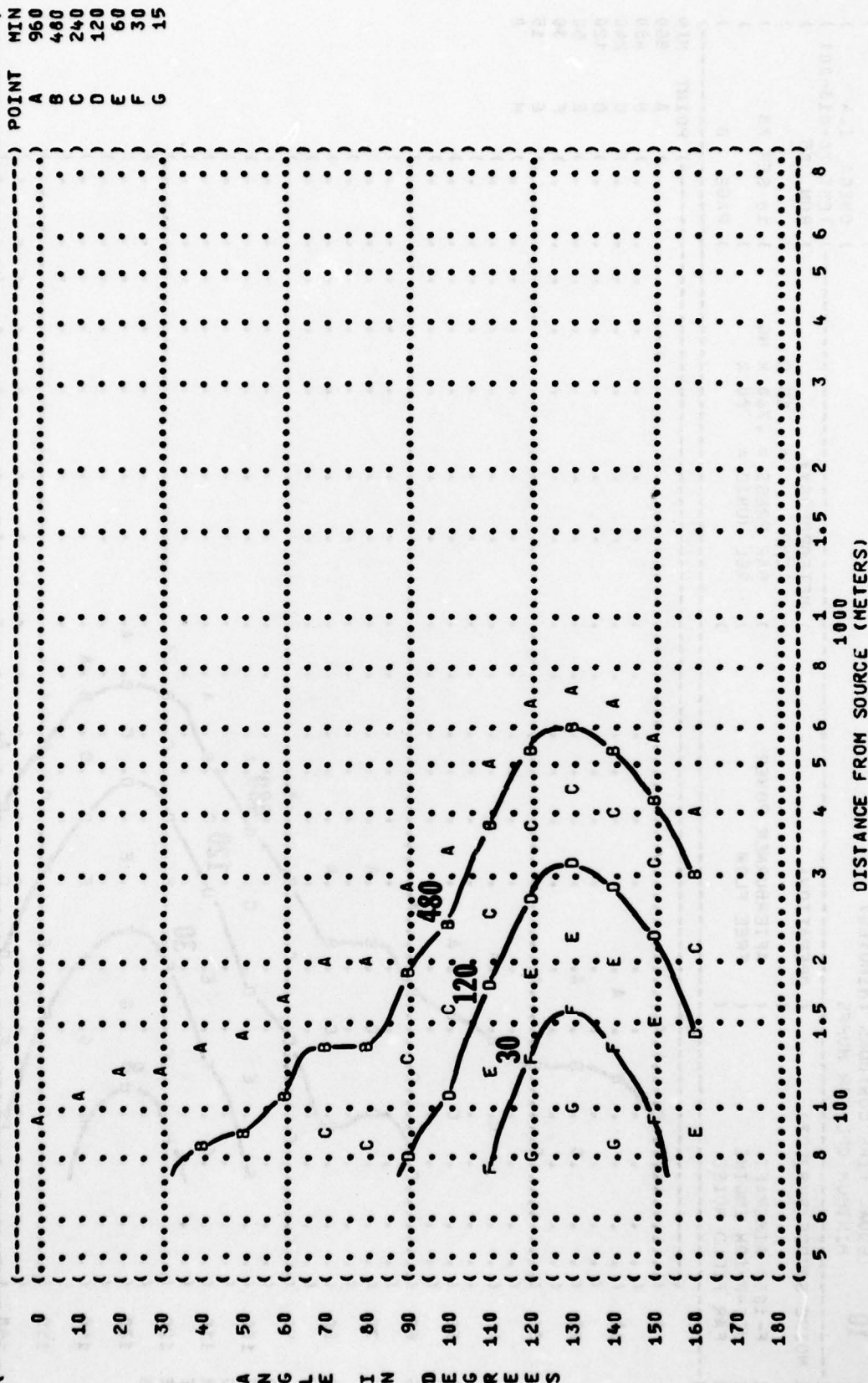


Figure 1 is a graph showing the dependence of the minimum value of the function MIN on the point number POINT. The x-axis is labeled "POINT" and ranges from 0 to 40. The y-axis is labeled "MIN" and ranges from 0 to 960. The graph shows a series of points connected by a line, with some points labeled with letters A through J. The line starts at (0, 0) and generally increases, with some fluctuations. The points are labeled as follows: A (0, 960), B (1, 480), C (2, 240), D (3, 120), E (4, 60), F (5, 30), G (6, 15), H (7, 8), I (8, 4), J (9, 2). The line connects these points in a sequence that generally follows the path of the minimum values.





(-----) IDENTIFICATION: (-----)  
 ( FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73) )  
 ( 10 EQUAL TIME CONTOURS (MINUTES) )  
 ( AMERICAN OPTICAL 1700 EAR MUFFS )  
 ( NOISE SOURCE/SUBJECT: ( OPERATION: ) METEOROLOGY: )  
 ( F-105D AIRCRAFT ( AFTERBURNER POWER ) TEMP = 15 C )  
 ( J75-P-19H ENGINE ( FREE FLOW ) BAR PRESS = .760 M HG )  
 ( FAR FIELD NOISE ( ) REL HUMID = 70 % )  
 ( ) PAGE 9 )  
 (-----)



A N G L E I N D E G R E E S

FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)

IDENTIFICATION:

10 EQUAL TIME CONTOURS (MINUTES)

OMEGA 1.4

TEST 78-013-001

RUN 05

18 SEP 78

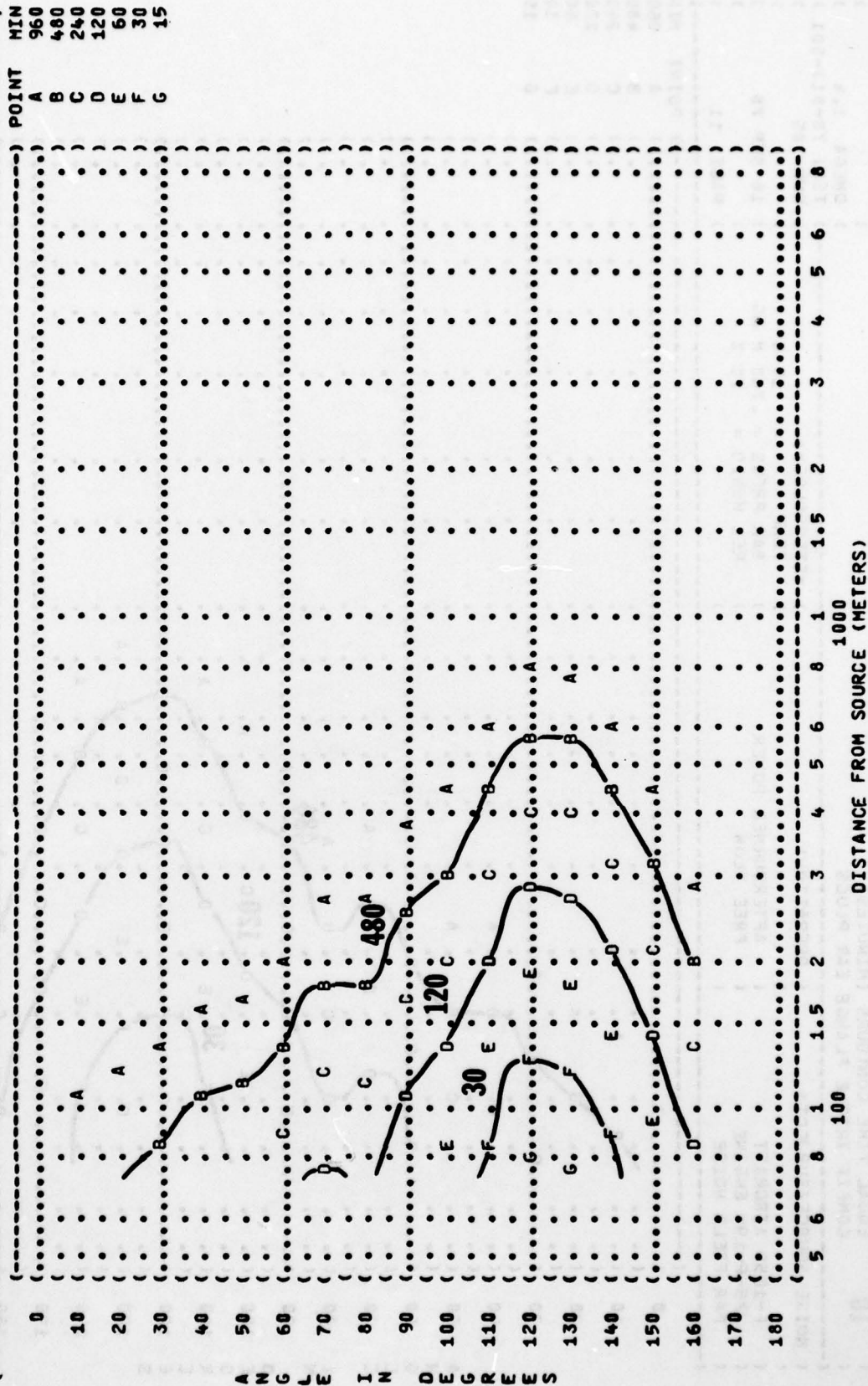
PAGE 10

NOISE SOURCE/SUBJECT: ( ) OPERATION: ( ) METEOROLOGY: ( )

F-1050 AIRCRAFT ( ) TEMP = 15 C

J75-P-19W ENGINE ( ) AFTERBURNER POWER ( ) BAR PRESS = .760 M HG

FAR FIELD NOISE ( ) FREE FLOW ( ) REL HUMID = 70 %



A N G L E I N D E G R E E S

FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73) IDENTIFICATION:  
 10 EQUAL TIME CONTOURS (MINUTES)  
 CONFIT TRIPLE FLANGE EAR PLUGS

NOISE SOURCE/SUBJECT: ( OPERATION: ) METEOROLOGY: TEMP = 15 C  
 F-105D AIRCRAFT ( AFTERBURNER POWER ) BAR PRESS = .760 M HG  
 J75-P-19W ENGINE ( FREE FLOW ) REL HUMID = 70 %  
 FAR FIELD NOISE ( ) PAGE 11

OMEGA 1.4  
 TEST 78-013-001  
 RUN 05  
 18 SEP 78

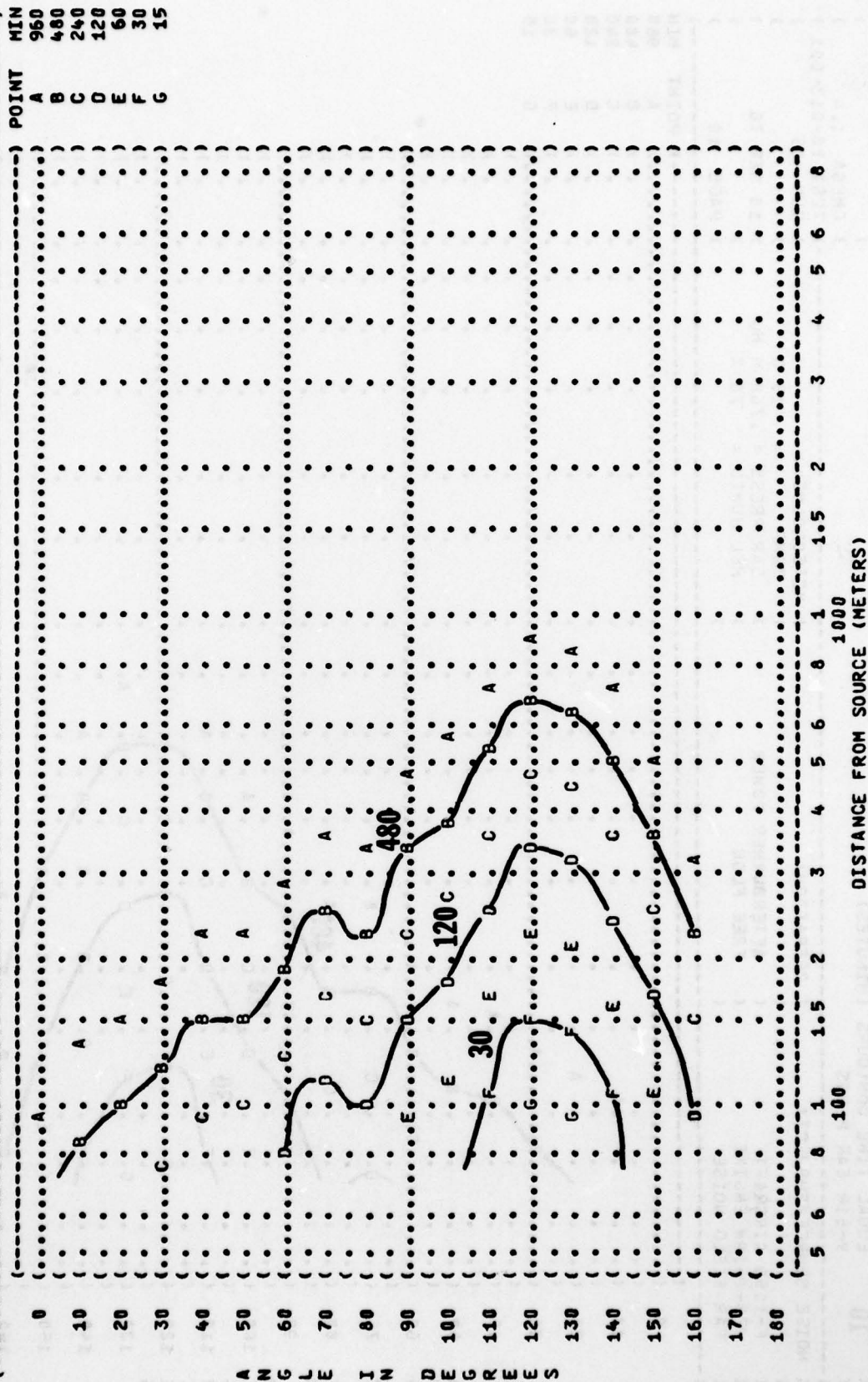


FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)

IDENTIFICATION:

10 EQUAL TIME CONTOURS (MINUTES)

H-133 GROUND COMMUNICATION UNIT

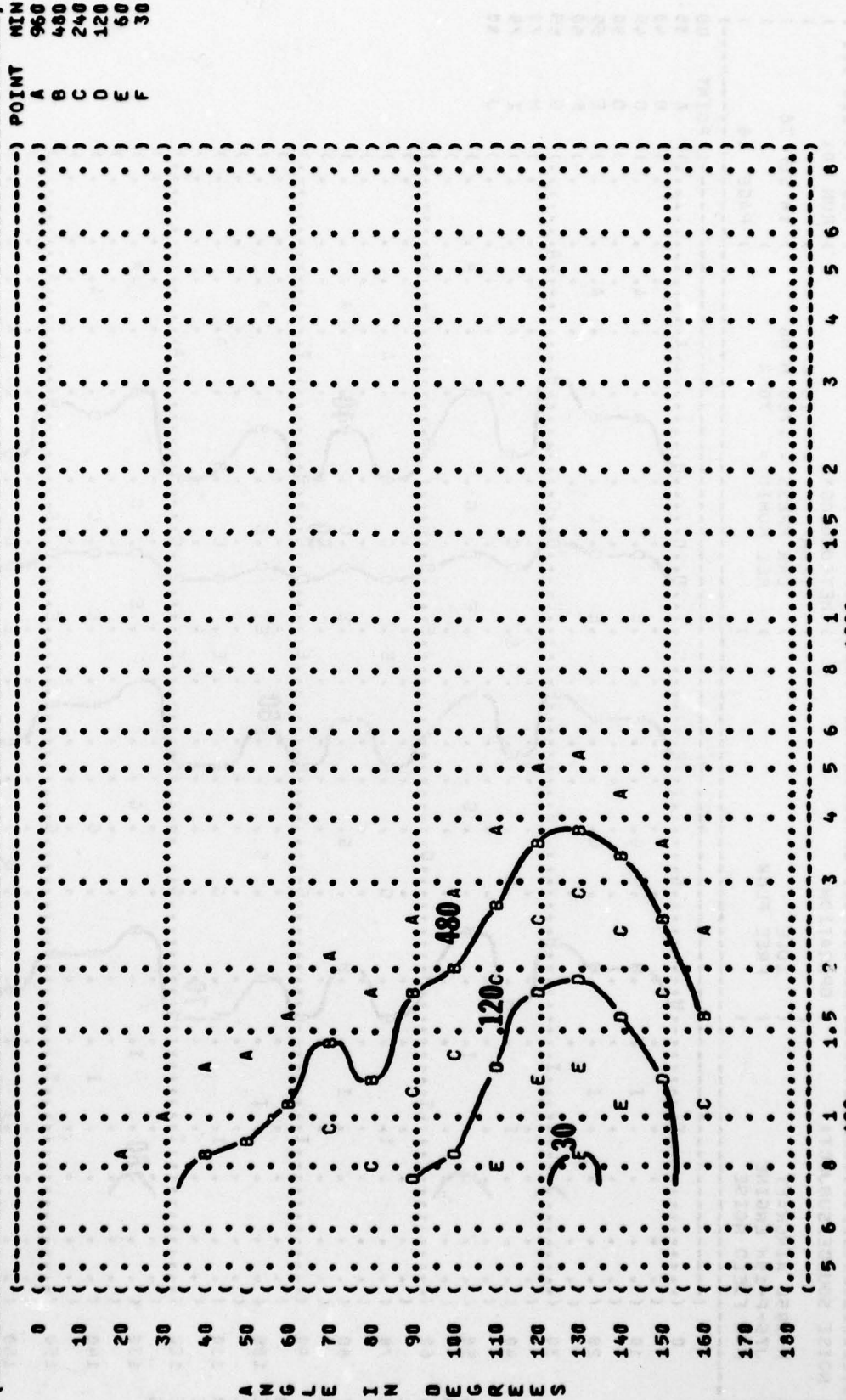
NOISE SOURCE/SUBJECT: OPERATION: METEOROLOGY: TEMP = 15 C

F-105D AIRCRAFT AFTERBURNER POWER BAR PRESS = .760 M HG

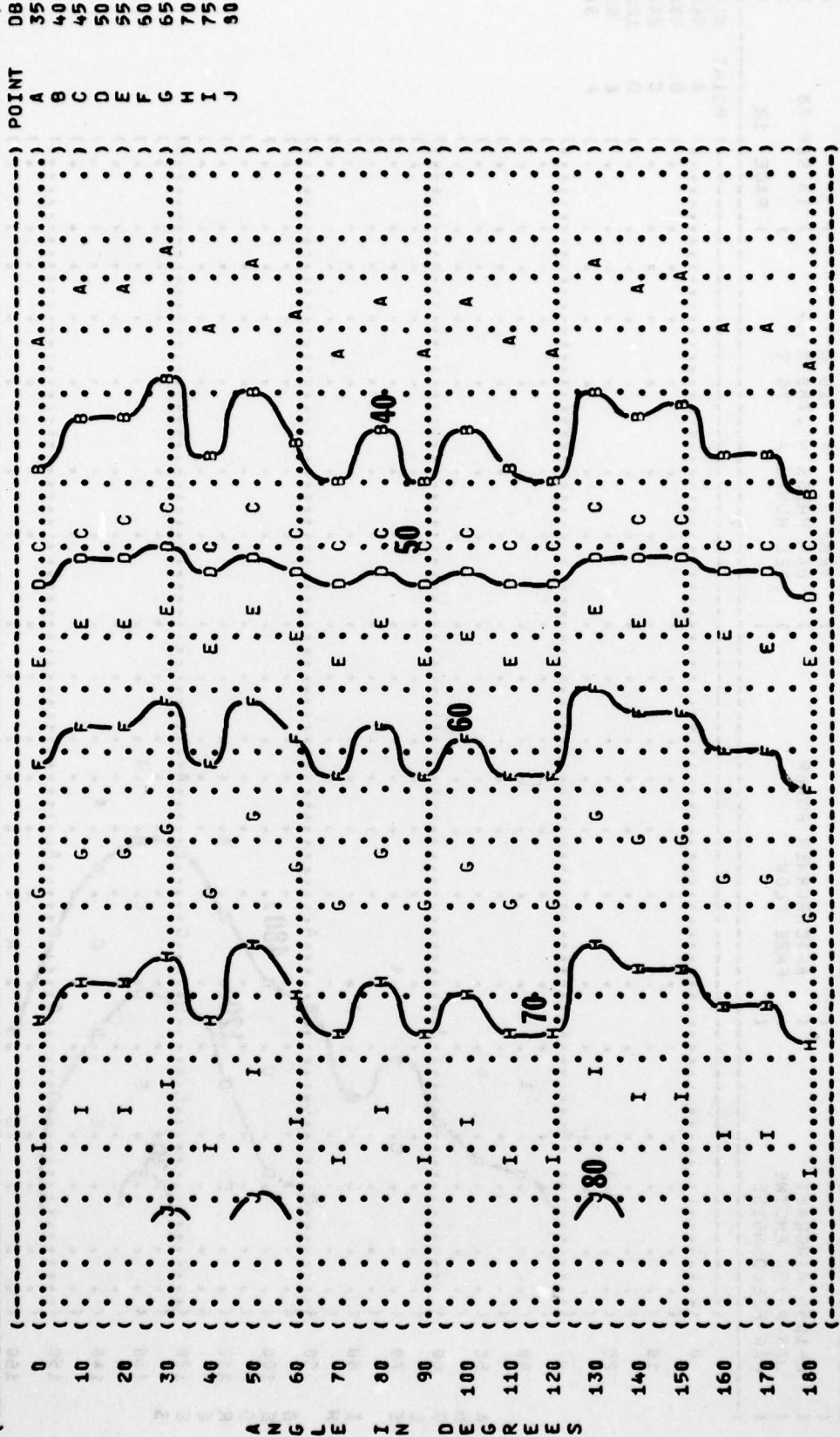
J75-P-19W ENGINE FREE FLOW REL HUMID = 70 %

FAR FIELD NOISE

PAGE 12



( ( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( ( 11 EQUAL LEVEL CONTOURS (DB)  
 ( ( 31.5 HZ OCTAVE BAND  
 ( ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( ( F-1050 AIRCRAFT ( ( IDLE ( FREE FLOW  
 ( ( J75-P-19W ENGINE ( ( BAR PRESS = .760 M HG  
 ( ( FAR FIELD NOISE ( ( REL HUMID = 70 %  
 ( ( METEOROLOGY: ( ( TEMP = 15 C  
 ( ( RUN 01 ( ( 18 SEP 78  
 ( ( TEST 78-013-001 ( ( PAGE 18  
 ( ( IDENTIFICATION: ( ( OMEGA 1.4



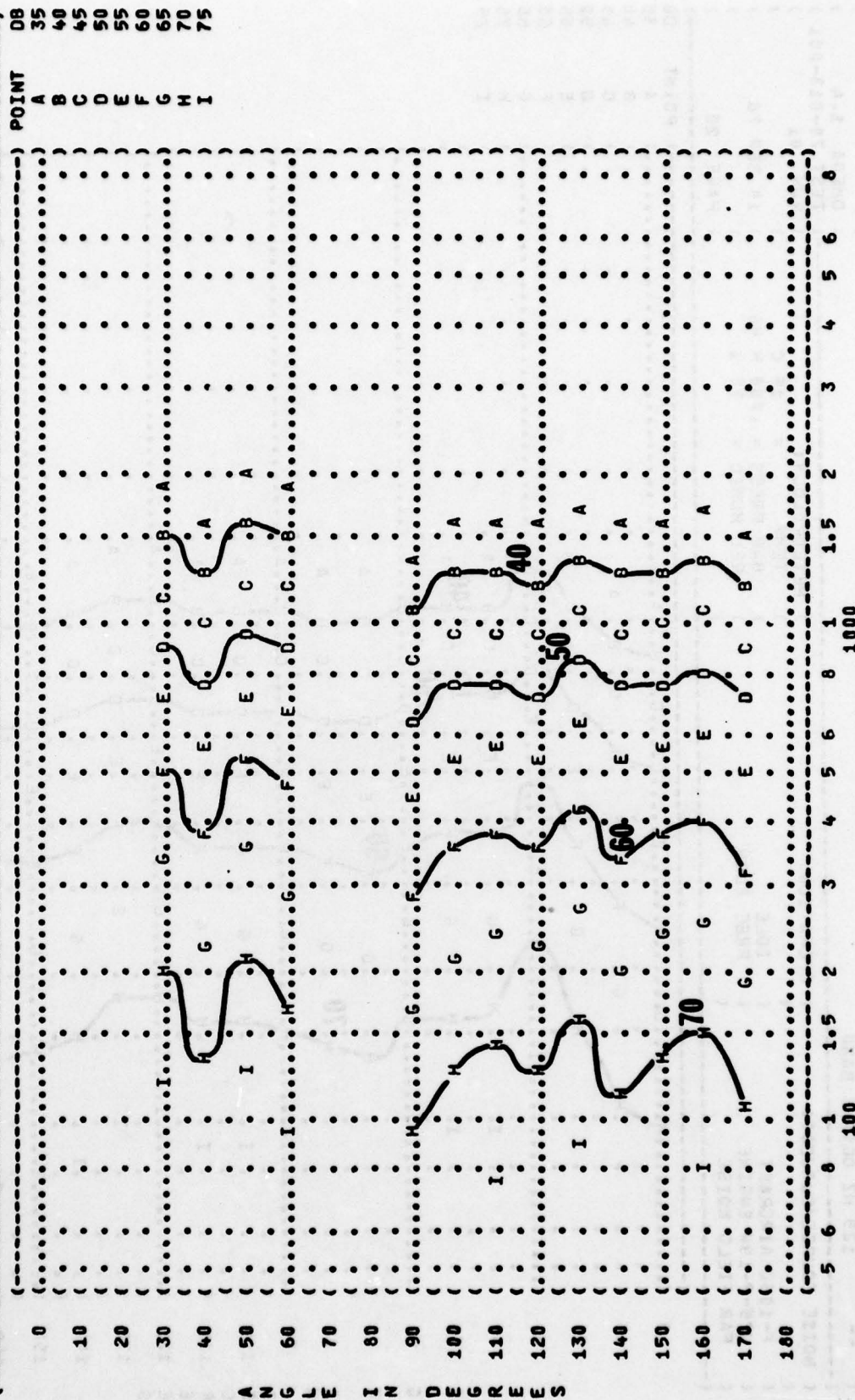
DISTANCE FROM SOURCE (METERS)

FIGURE: SOUND PRESSURE LEVEL (SPL)  
 EQUAL LEVEL CONTOURS (DB)  
 63 HZ OCTAVE BAND

11

IDENTIFICATION:  
 OMEGA 1.4  
 TEST 78-013-001  
 RUN 01  
 18 SEP 78  
 PAGE 19

NOISE SOURCE/SUBJECT: OPERATION: METEOROLOGY:  
 F-105D AIRCRAFT IDLE TEMP = 15 C  
 J75-P-19W ENGINE FREE FLOW BAR PRESS = .760 M HG  
 FAR FIELD NOISE REL HUMID = 70 %



**FIGURE 11** SOUND PRESSURE LEVEL {SPL} EQUAL LEVEL CONTOURS (DB) 125 HZ OCTAVE BAND

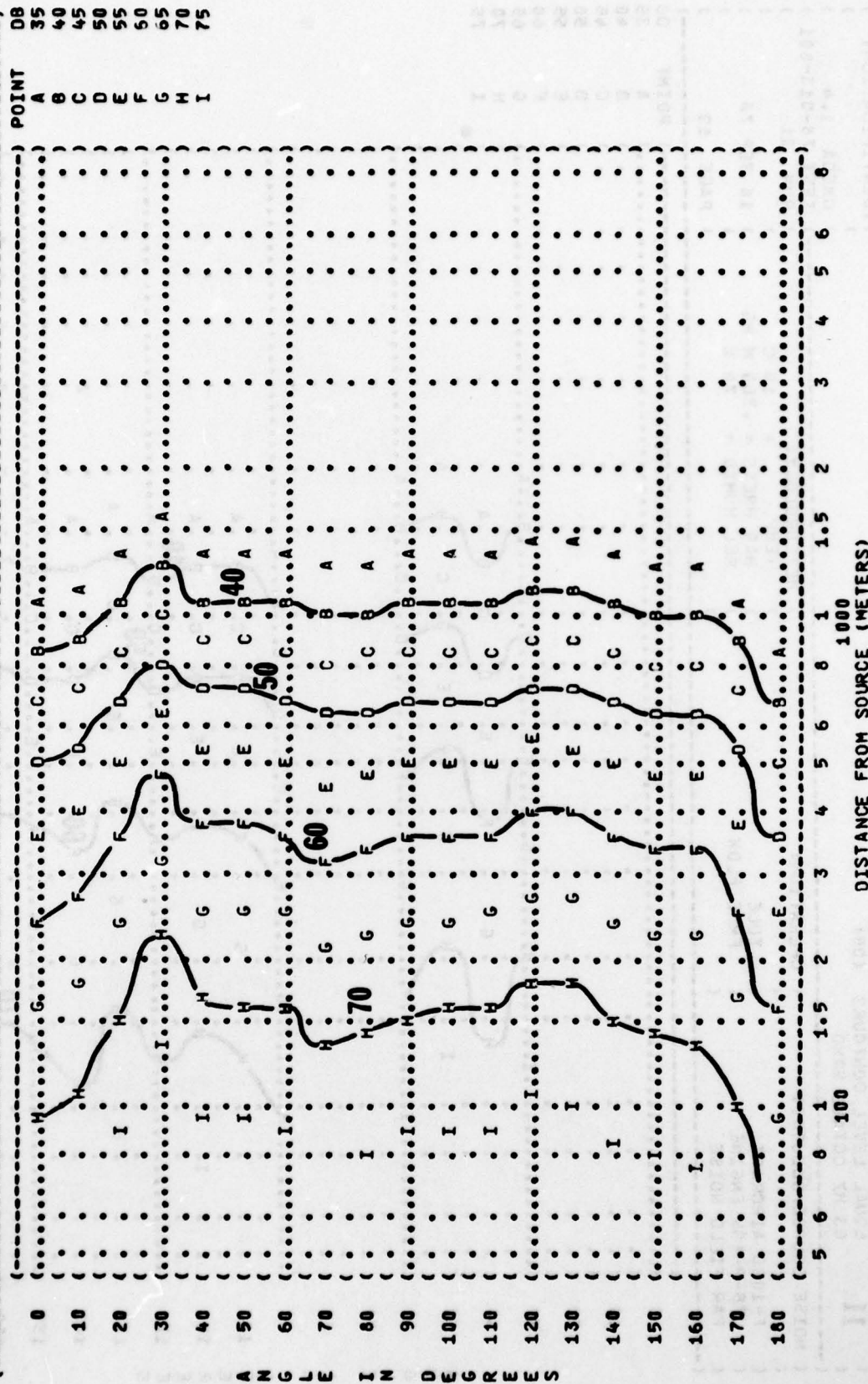
IDENTIFICATION:  
OMEGA 1.4  
TEST 78-013-001  
RUN 01

NOISE SOURCE/SUBJECT: ( OPERATION:

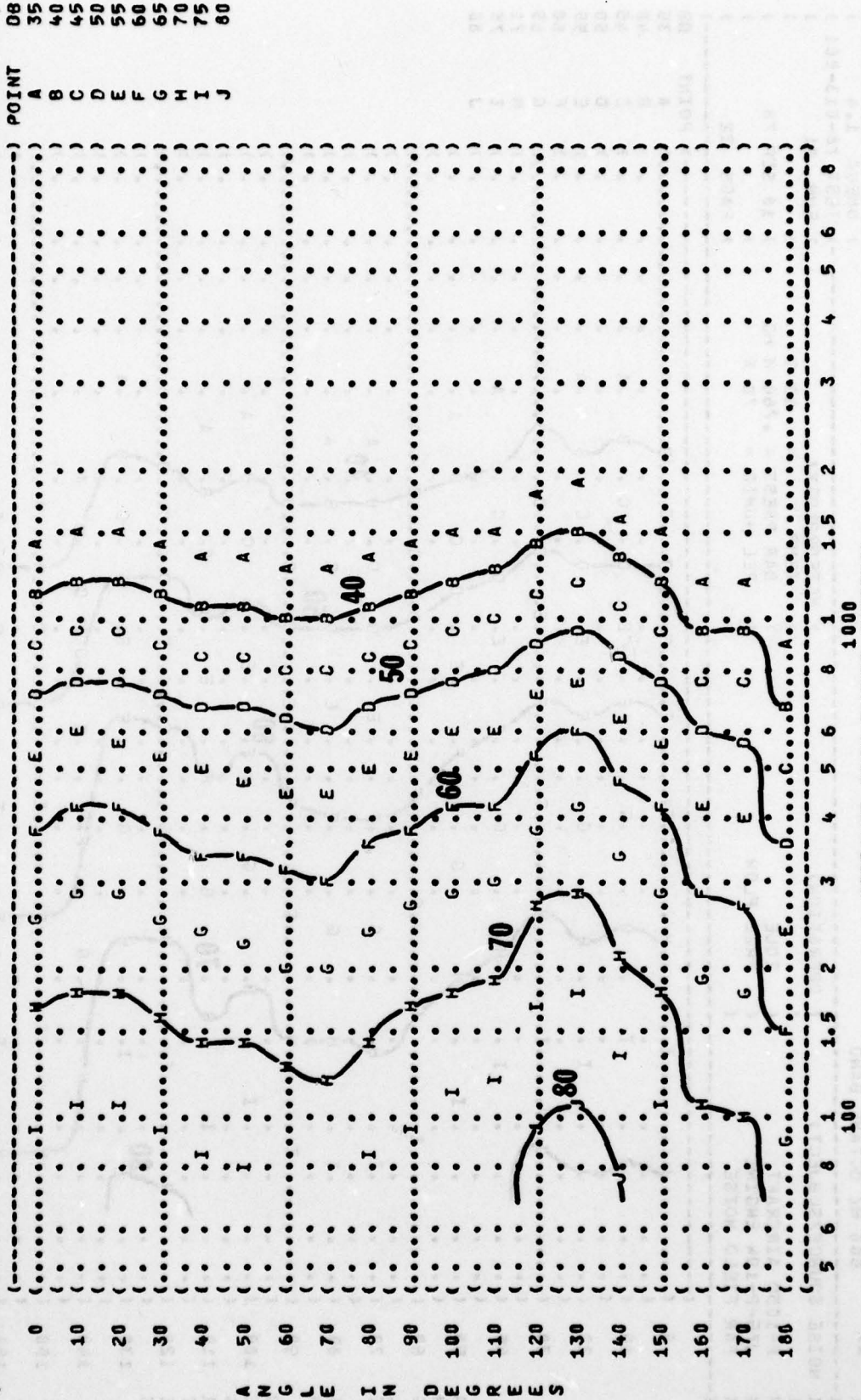
## 1) METEOROLOGY:

F-1050 AIRCRAFT  
J75-P-19W ENGINE  
FAR FIELD NOISE

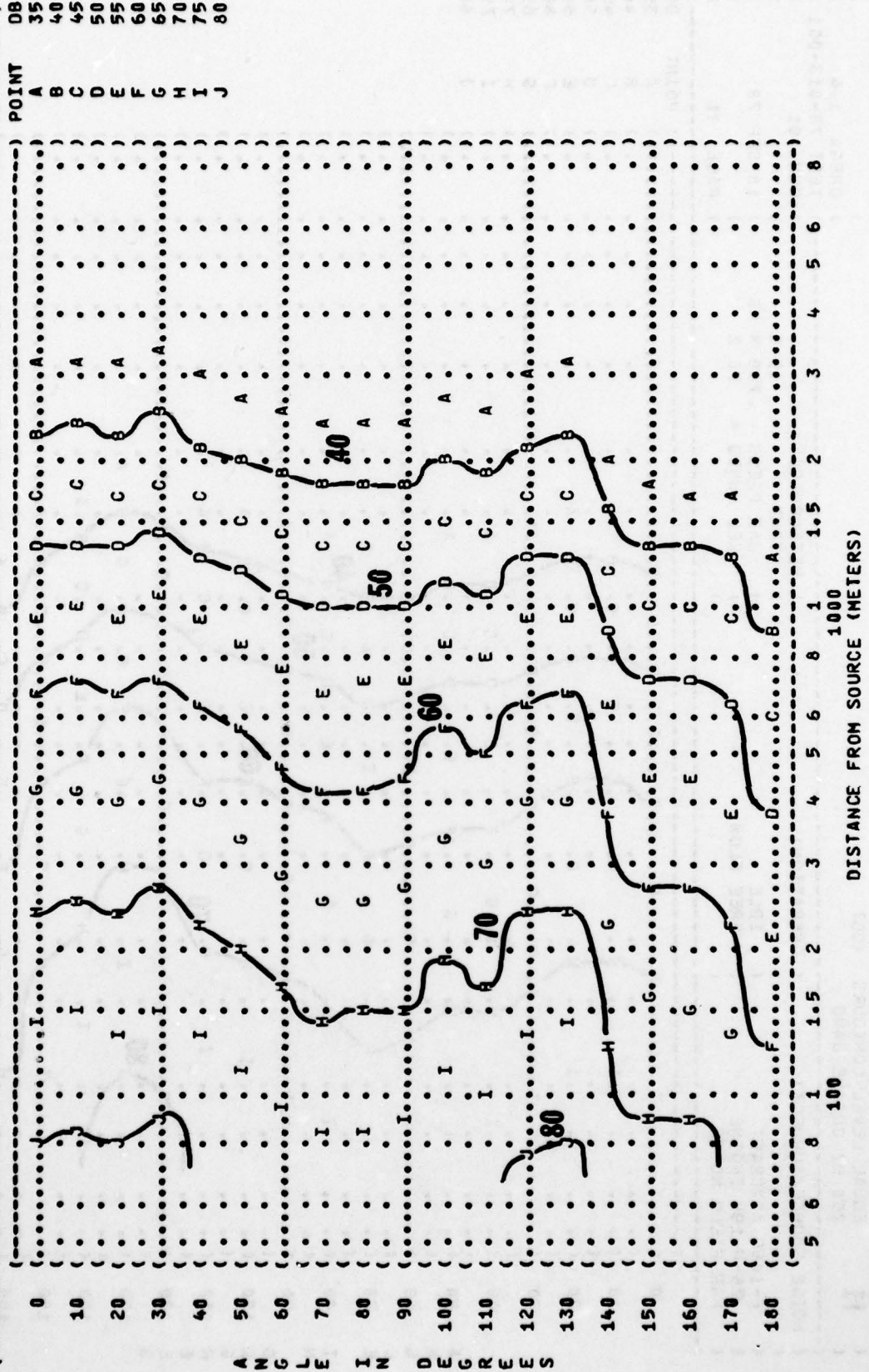
**PAGE 20**



( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 11 EQUAL LEVEL CONTOURS (DB)  
 ( 250 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION: ( METEOROLOGY: ( IDENTIFICATION: )  
 ( F-105D AIRCRAFT ( ( TEMP = 15 C ( OMEGA 1.4  
 ( J75-P-19W ENGINE ( ( BAR PRESS = .750 M HG ( TEST 78-013-001  
 ( FAR FIELD NOISE ( ( REL HUMID = 70 % ( RUN 01  
 ( ( ( 18 SEP 78 ( ( ( ( ( PAGE 21 )



( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 11 EQUAL LEVEL CONTOURS (DB)  
 ( 500 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( F-1050 AIRCRAFT ( ( IDLE ( FREE FLOW  
 ( J75-P-19W ENGINE ( ( BAR PRESS = .760 M HG  
 ( FAR FIELD NOISE ( ( REL HUMID = 70 %  
 ( ( METEOROLOGY: ( TEMP = 15 C  
 ( ( ( RUN 01  
 ( ( ( 18 SEP 78  
 ( ( ( PAGE 22  
 ( IDENTIFICATION: ( OMEGA 1.4  
 ( TEST 78-013-001  
 (



A N G L E I N D E G R E E S

FIGURE: SOUND PRESSURE LEVEL (SPL)  
 11 EQUAL LEVEL CONTOURS (DB)  
 1000 HZ OCTAVE BAND  
 NOISE SOURCE/SUBJECT: ( ) OPERATION: ( ) METEOROLOGY: ( )  
 F-105D AIRCRAFT ( ) IDLE ( ) TEMP = 15 C  
 J75-P-19W ENGINE ( ) FREE FLOW ( ) BAR PRESS = .760 M HG  
 FAR FIELD NOISE ( ) REL HUMID = 70 %  
 18 SEP 78  
 PAGE 23

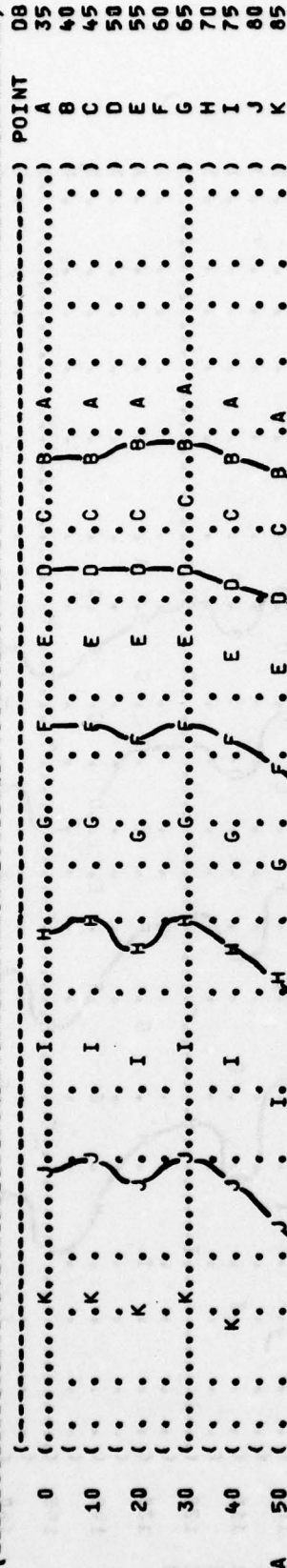
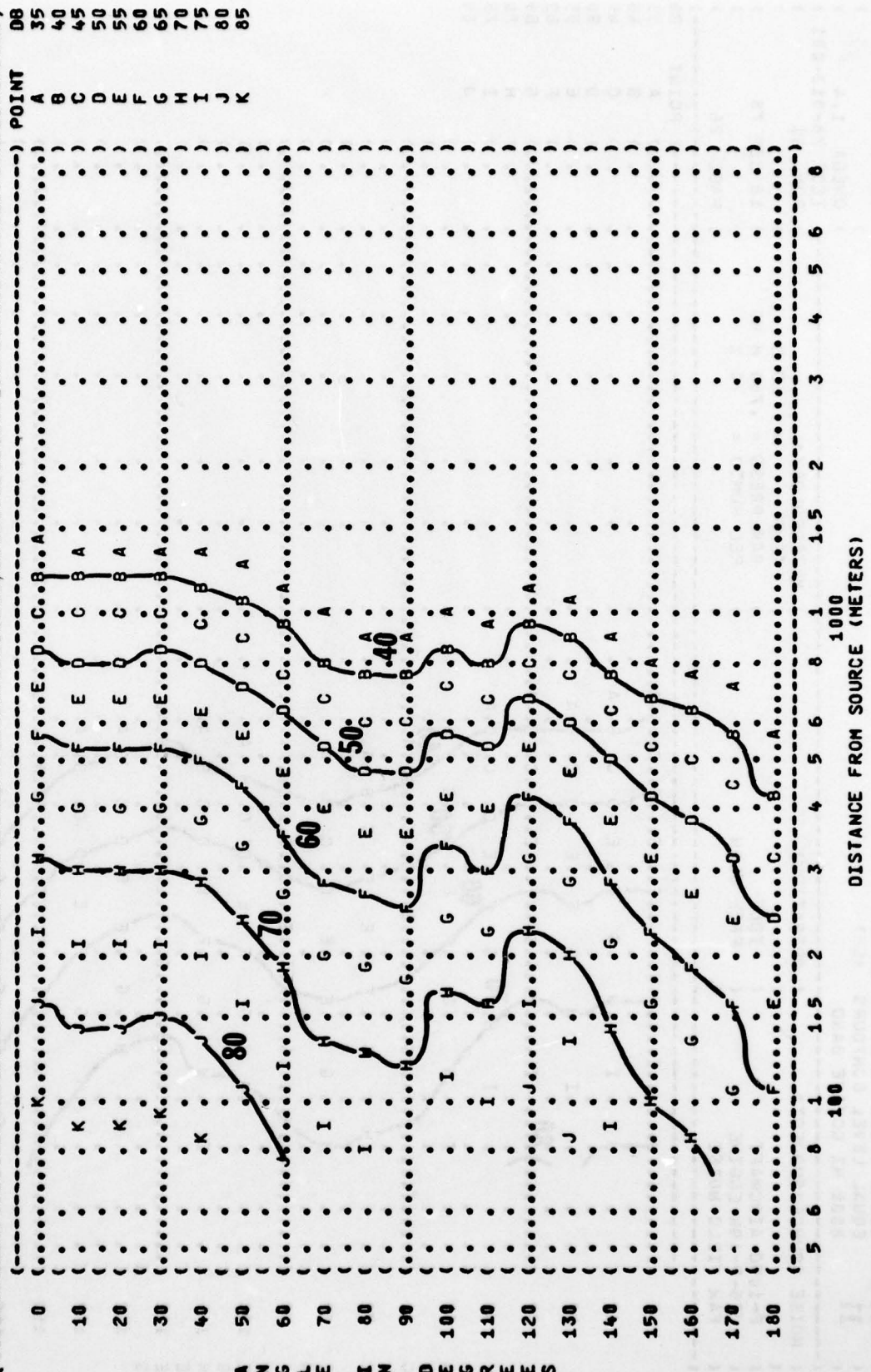




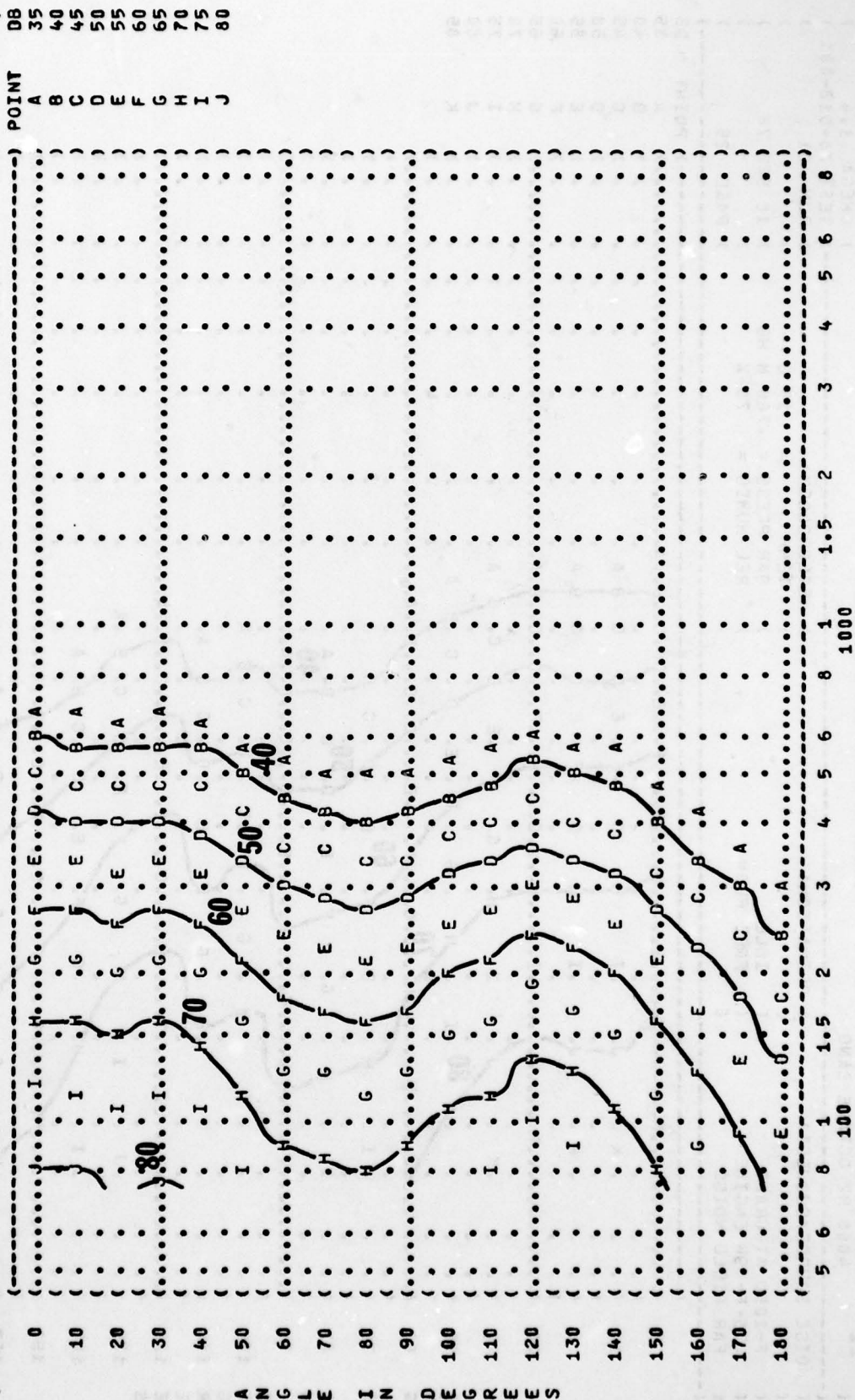
FIGURE: SOUND PRESSURE LEVEL (SPL)  
 11 EQUAL LEVEL CONTOURS (DB)  
 4000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT: ( ) OPERATION: ( ) METEOROLOGY: ( )  
 ( ) F-1050 AIRCRAFT ( ) IDLE ( ) TEMP = 15 C  
 ( ) J75-P-19W ENGINE ( ) FREE FLOW ( ) BAR PRESS = .760 M HG  
 ( ) FAR FIELD NOISE ( ) ( ) REL HUMID = 70 %

IDENTIFICATION: ( )  
 ( )  
 ( ) OMEGA 1.4  
 ( ) TEST 70-013-001  
 ( ) RUN 01  
 ( ) 18 SEP 78  
 ( ) PAGE 25



( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 11 EQUAL LEVEL CONTOURS (DB)  
 ( 8000 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( F-1050 AIRCRAFT ( IDLE  
 ( J75-P-19W ENGINE ( FREE FLOW  
 ( FAR FIELD NOISE ( )  
 ( ) METEOROLOGY:  
 ( ) TEMP = 15 C  
 ( ) BAR PRESS = .760 M HG  
 ( ) REL HUMID = 70 %  
 ( ) PAGE 26  
 ( ) IDENTIFICATION:  
 ( ) OMEGA 1.4  
 ( ) TEST 78-013-001  
 ( ) RUN 01  
 ( ) 18 SEP 78  
 ( ) POINT DB  
 ( ) A 35  
 ( ) B 40  
 ( ) C 45  
 ( ) D 50  
 ( ) E 55  
 ( ) F 60  
 ( ) G 65  
 ( ) H 70  
 ( ) I 75  
 ( ) J 80



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AEROSPACE MEDICAL RESEARCH LAB WRIGHT-PATTERSON AFB OH  
USAF BIOENVIRONMENTAL NOISE DATA HANDBOOK. VOLUME 125. F-105D A--ETC(U)  
OCT 78 R G POWELL

F/G 1/3

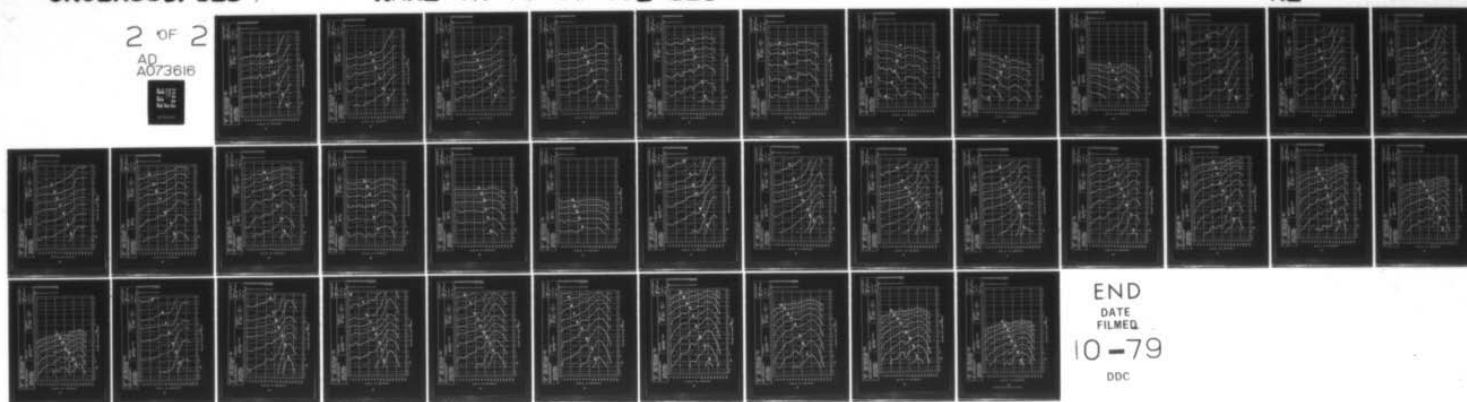
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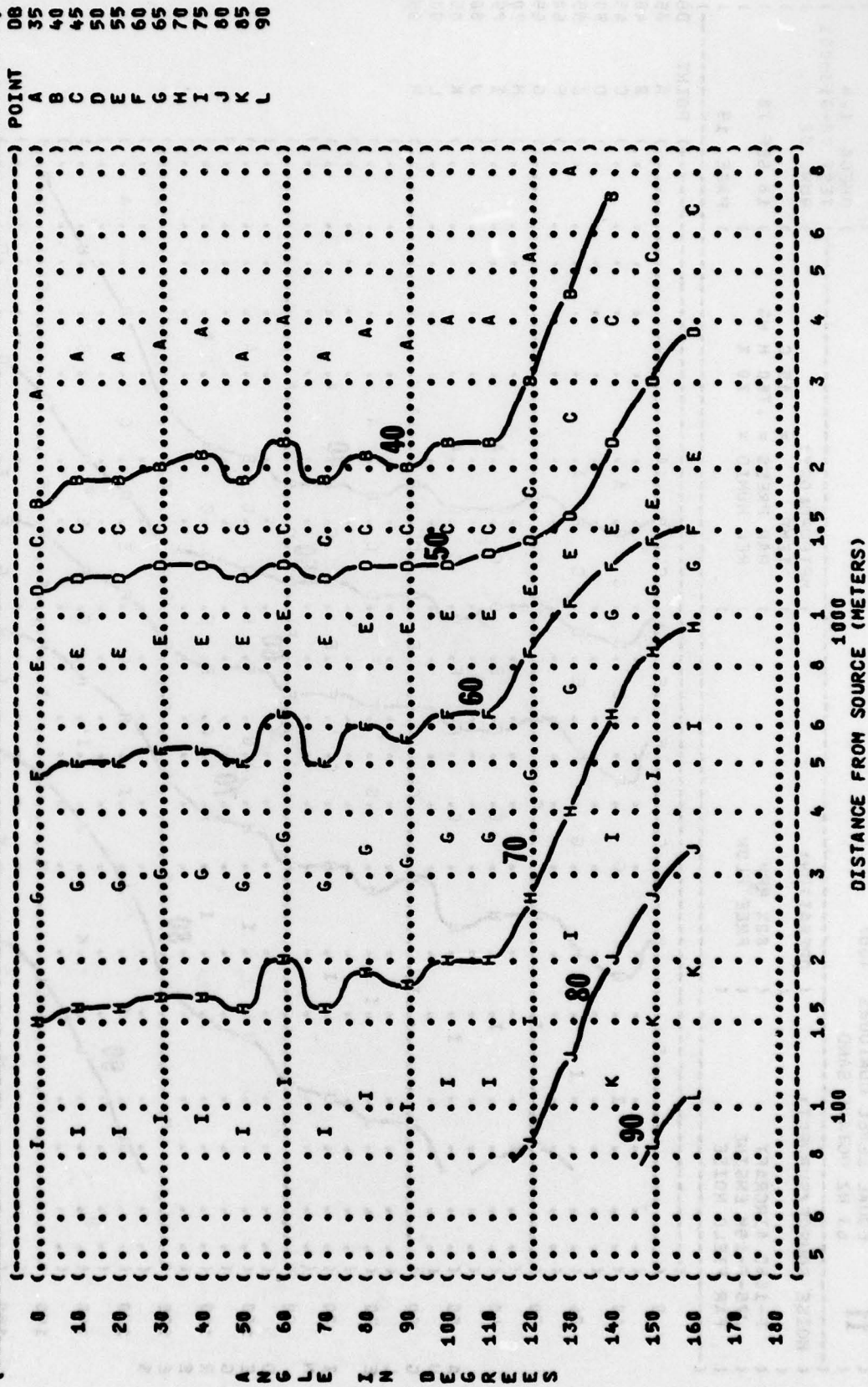
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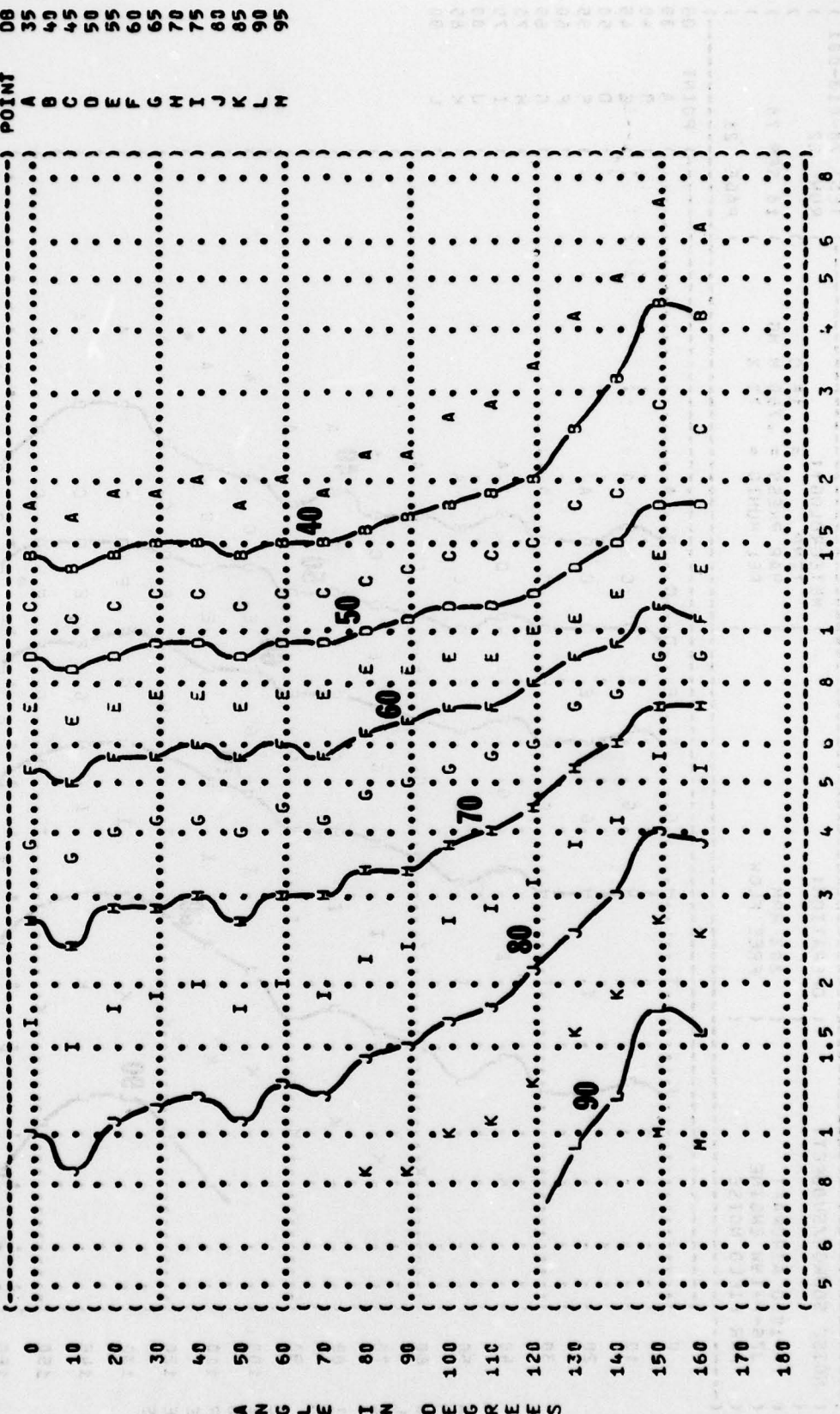
MICROCOPY RESOLUTION TEST CHART  
NATIONAL BUREAU OF STANDARDS-1963-A

FIGURE: SOUND PRESSURE LEVEL (SPL)  
 11 EQUAL LEVEL CONTOURS (DB)  
 31.5 HZ OCTAVE BAND  
 NOISE SOURCE/SUBJECT: ( ) OPERATION: ( ) METEOROLOGY: ( ) IDENTIFICATIONS: ( )  
 F-1050 AIRCRAFT ( ) 90% RPM ( ) TEMP = 15 C ( ) OMEGA 1.4  
 J75-P-19W ENGINE ( ) FREE FLOW ( ) BAR PRESS = .760 M HG ( ) TEST 78-013-001  
 FAR FIELD NOISE ( ) ( ) REL HUMID = 70 % ( ) RUN 02  
 ( ) ( ) ( ) 18 SEP 78  
 ( ) ( ) ( ) PAGE 18





( ( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( ( 11 EQUAL LEVEL CONTOURS (DB)  
 ( ( 125 HZ OCTAVE BAND  
 ( ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( ( F-105D AIRCRAFT ( 80% RPM  
 ( ( J75-P-19W ENGINE ( FREE FLOW  
 ( ( FAR FIELD NOISE ( )  
 ( ( METEOROLOGY: )  
 ( ( TEMP = 15 C )  
 ( ( BAR PRESS = .760 M HG )  
 ( ( REL HUMID = 70 % )  
 ( ( ) 10 SEP 76 )  
 ( ( ) PAGE 20 )  
 ( ( IDENTIFICATION: )  
 ( ( ) OMEGA 1.4 )  
 ( ( ) TEST 76-013-C91 )  
 ( ( ) RUN 02 )



DISTANCE FROM SOURCE (METERS)

FIGURE 1 SOUND PRESSURE LEVEL (SPL)  
EQUAL LEVEL CONTOURS (DB)  
250 HZ OCTAVE BAND

11

NOISE SOURCE/SUBJECT:

F-1050 AIRCRAFT  
J75-P-19W ENGINE  
FAR FIELD NOISE

OPERATION:

80% RPM  
FREE FLOW

METEOROLOGY:

TEMP = 15 C  
BAR PRESS = .760 M HG  
REL HUMID = 70 %

IDENTIFICATION:

OMEGA 1.4

TEST 78-013-001

RUN 02

18 SEP 78

PAGE 21

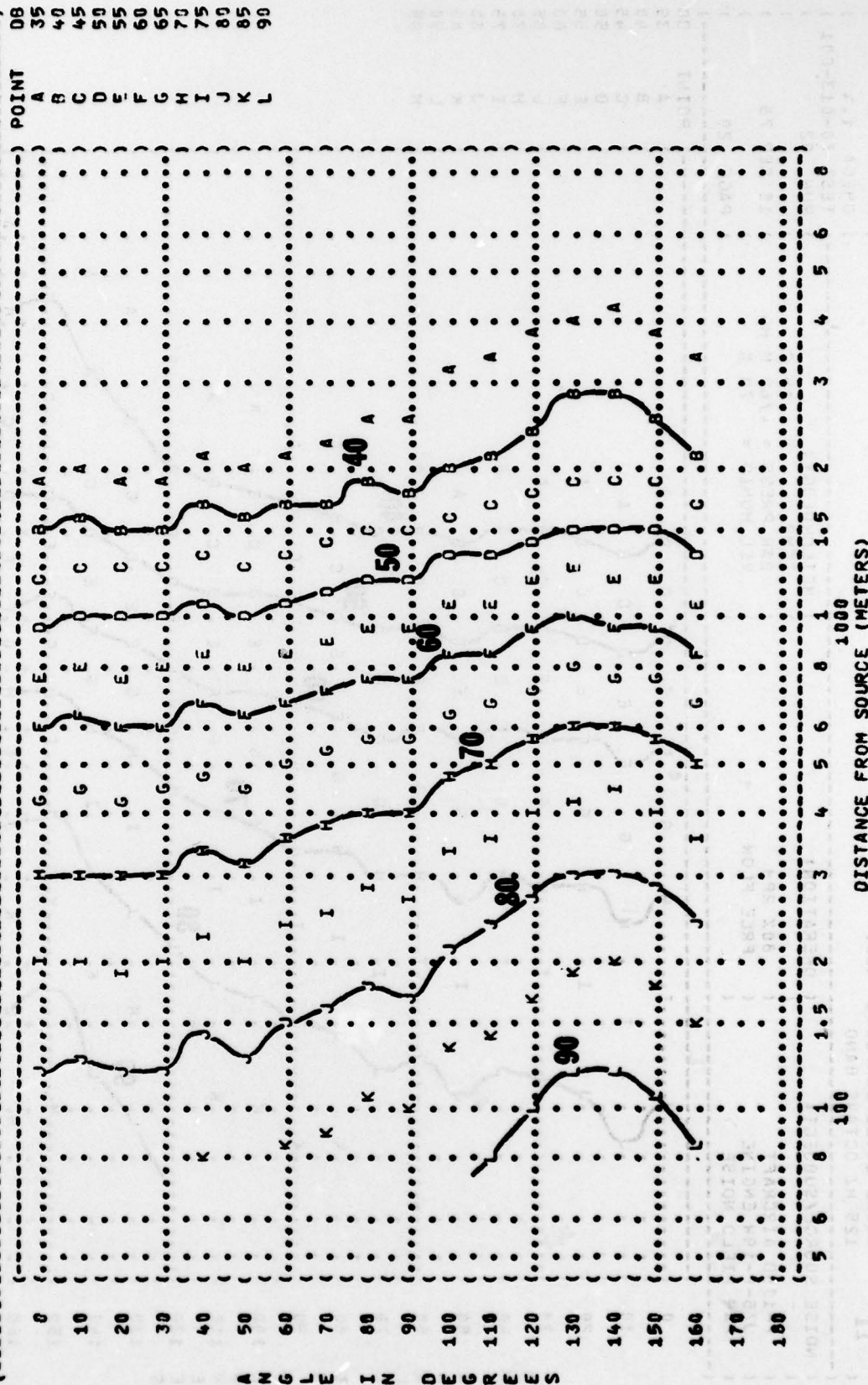
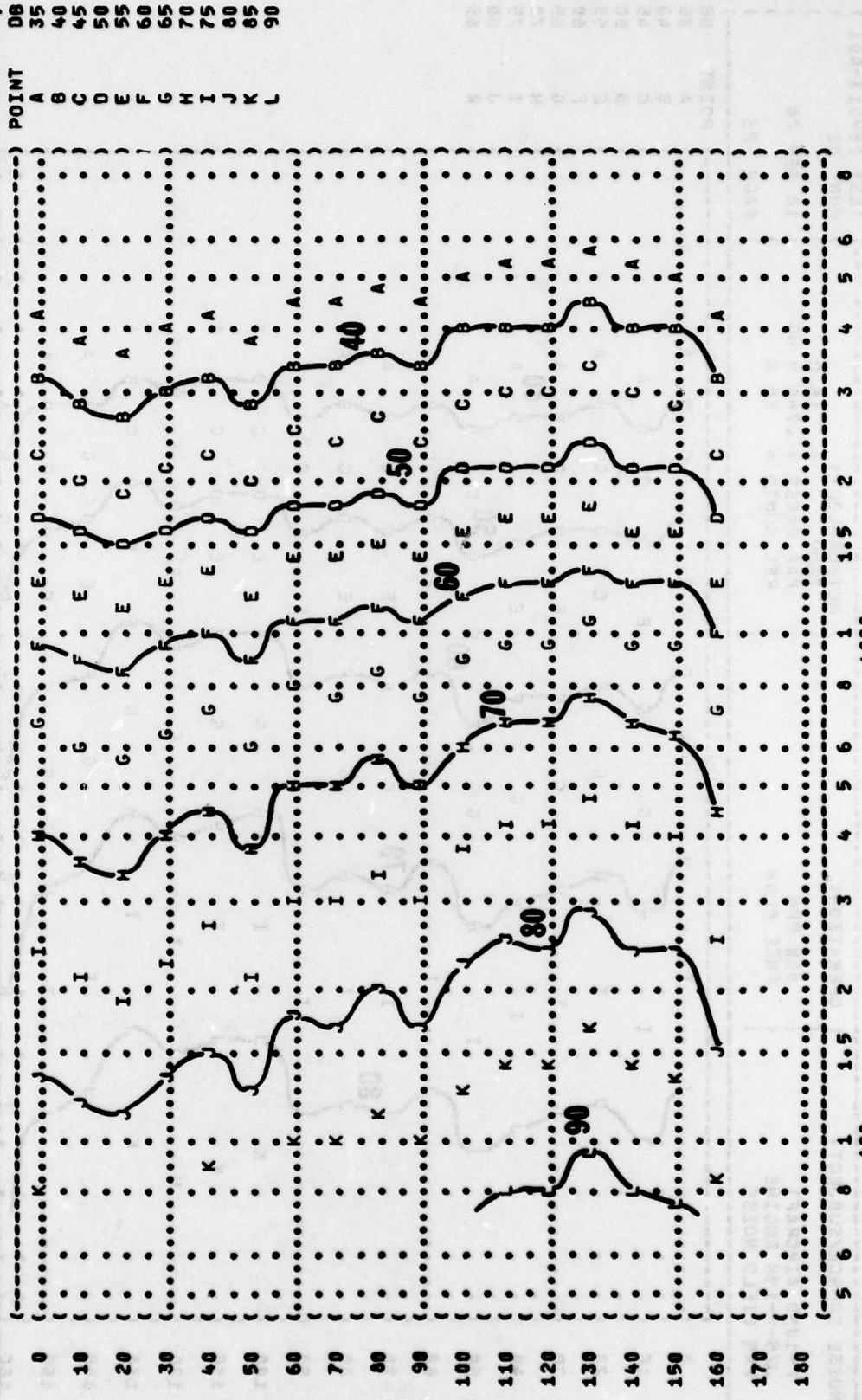


FIGURE: SOUND PRESSURE LEVEL (SPL)  
EQUIL LEVEL CONTOURS (DB)  
500 HZ OCTAVE BAND

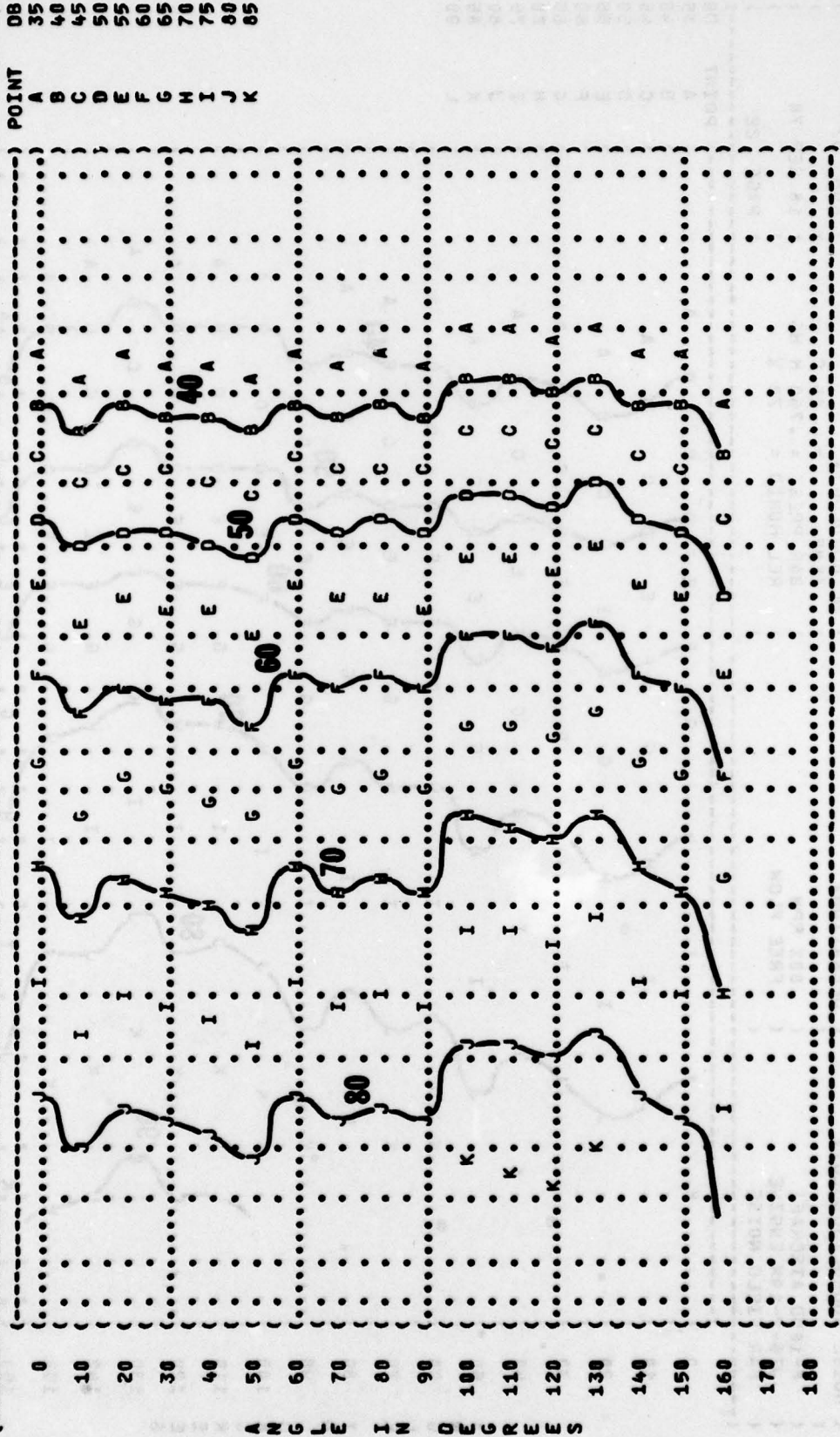
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IDENTIFICATION:  
OMEGA 1.4  
TEST 78-013-001  
RUN 02  
METEOROLOGY:  
TEMP = 15 C  
BAR PRESS = .760 M HG  
REL HUMID = 70 %  
OPERATION:  
80% RPM  
FREE FLOW  
NOISE SOURCE/SUBJECT:  
F-105D AIRCRAFT  
J75-P-19M ENGINE  
FAR FIELD NOISE



DISTANCE FROM SOURCE (METERS)

( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 11 EQUAL LEVEL CONTOURS (DB)  
 ( 1000 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( F-1050 AIRCRAFT ( 80% RPM  
 ( J75-P-19W ENGINE ( FREE FLOW  
 ( FAR FIELD NOISE ( )  
 ( ) METEOROLOGY: )  
 ( ) TEMP = 15 C )  
 ( ) BAR PRESS = .760 M HG )  
 ( ) REL HUMID = 70 % )  
 ( ) PAGE 23 )  
 ( ) IDENTIFICATION: )  
 ( ) OMEGA 1.4 )  
 ( ) TEST 78-013-001 )  
 ( ) RUN 02 )  
 ( ) 18 SEP 78 )  
 ( ) )



DB 35  
 A  
 B 40  
 C 45  
 D 50  
 E 55  
 F 60  
 G 65  
 H 70  
 I 75  
 J 80  
 K 85

IDENTIFICATION: )  
OMEGA 1.4 )

OMEGA 1-4

02 RUN

02 RUN

18 SEP 78

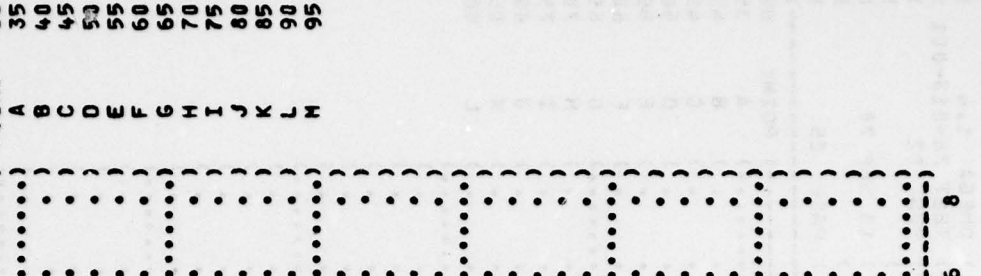
18 SEP 78

PAGE 24 )

PAGE 24 )

-----) POINT DB

-----) POINT DB



DISTANCE FROM SOURCE (METERS)

ANGLER IN DECKWHEELS

( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 11 EQUAL LEVEL CONTOURS (DB)  
 ( 4000 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( F-105D AIRCRAFT ( 80% RPM  
 ( J75-P-19W ENGINE ( FREE FLOW  
 ( FAR FIELD NOISE ( )  
 ( ) METEOROLOGY: ( )  
 ( ) TEMP = 15 C  
 ( ) BAR PRESS = .760 M HG  
 ( ) REL HUMID = 70 %  
 ( ) IDENTIFICATION: ( )  
 ( ) OMEGA 1.4  
 ( ) TEST 78-013-001  
 ( ) RUN 02  
 ( ) 18 SEP 78  
 ( ) PAGE 25

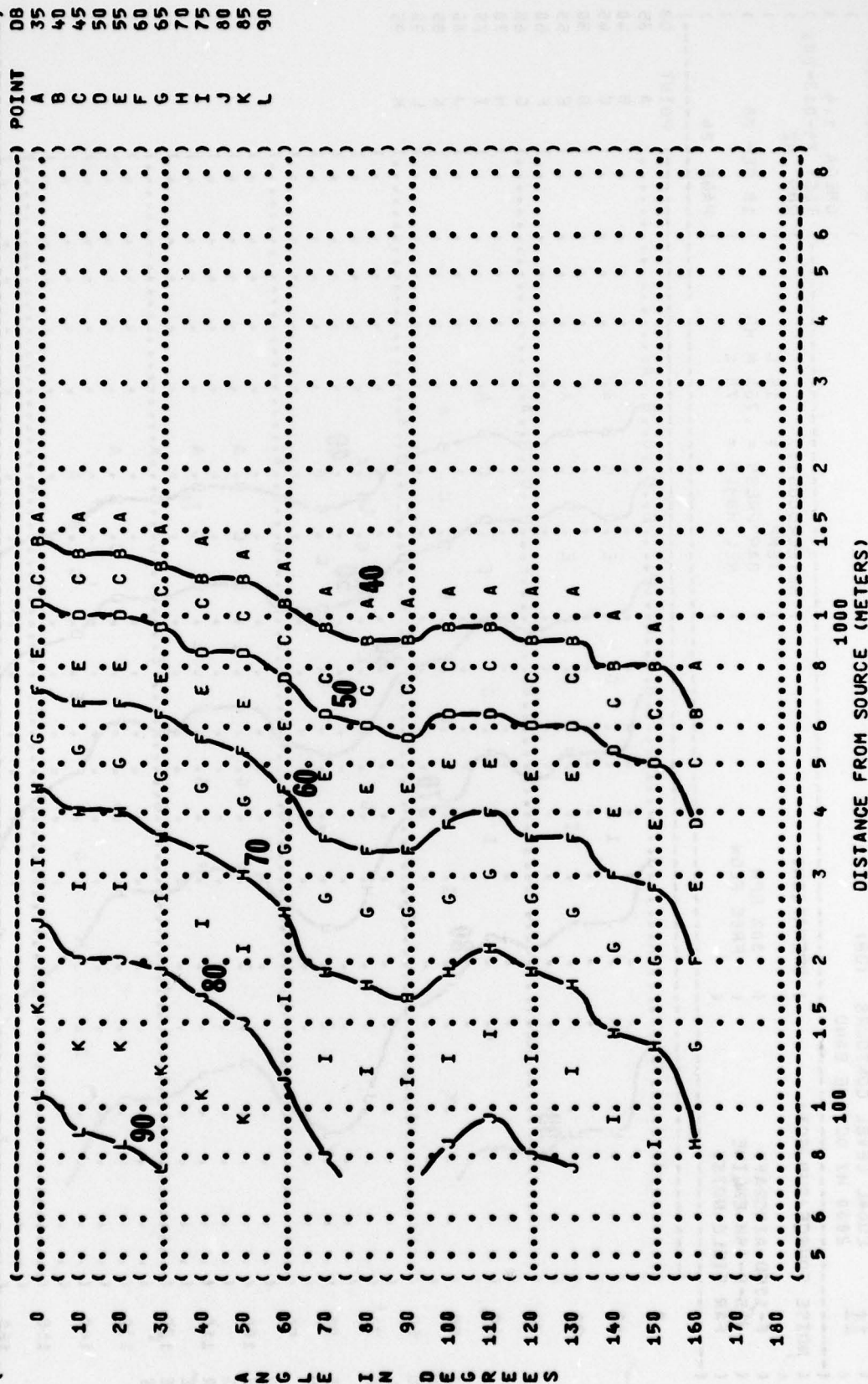
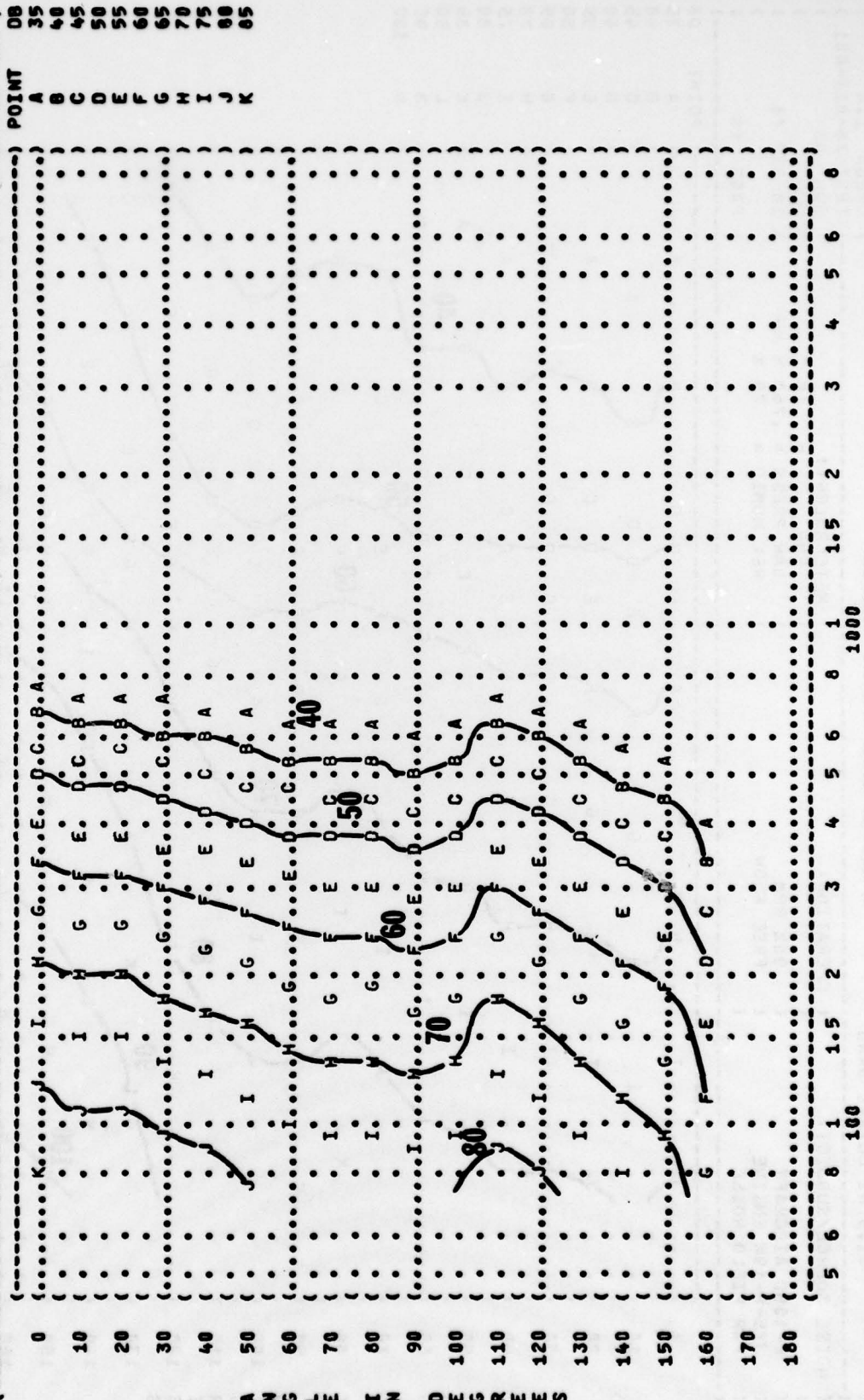


FIGURE 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 8000 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4  
TEST 78-013-001  
RUN 02  
METEOROLOGY: TEMP = 15 C  
BAR PRESS = .760 H HG  
REL HUMID = 70 %  
OPERATION: 80% RPM  
FREE FLOW  
NOISE SOURCE/SUBJECT: F-105D AIRCRAFT  
J75-P-19W ENGINE  
FAR FIELD NOISE



DISTANCE FROM SOURCE (METERS)

FIGURE	SOUND PRESSURE LEVEL {SPL}	IDENTIFICATION
11	EQUAL LEVEL CONTOURS (DB)	
	31.5 HZ OCTAVE BAND	OMEGA 1.4
		TEST 78-013-001
		RUN 03
NOISE SOURCE/SUBJECT	OPERATION	METEOROLOGY
F-105D AIRCRAFT	90% RPM	TEMP = 15 C
J75-P-19W ENGINE	FREE FLOW	BAR PRESS = .760 M HG
FAR FIELD NOISE		REL HUMID = 70 %
		PAGE 18

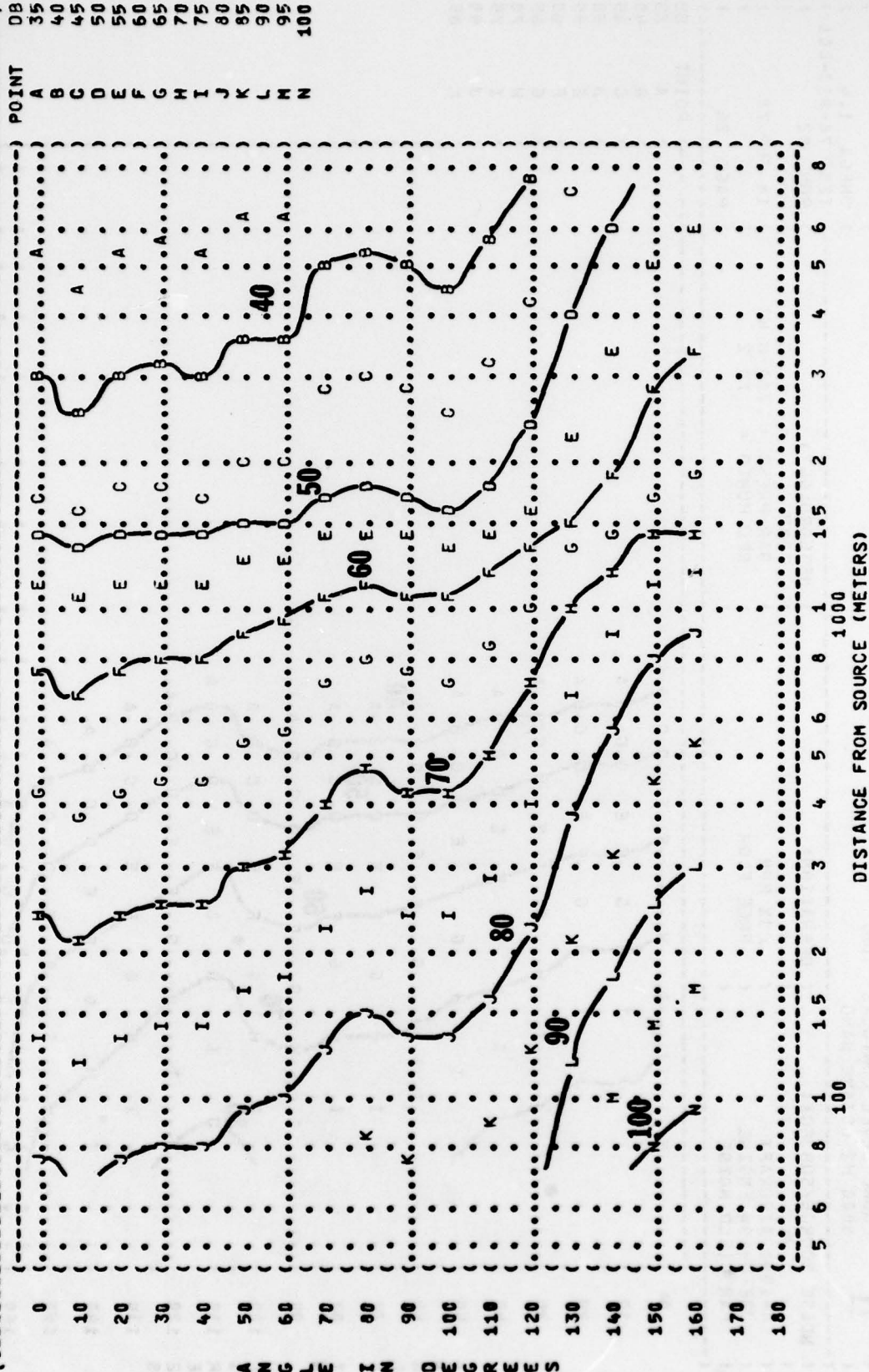


FIGURE: SOUND PRESSURE LEVEL (SPL)  
EQUAL LEVEL CONTOURS (DB)  
63 HZ OCTAVE BAND

11

IDENTIFICATION:  
OMEGA 1.4  
TEST 78-013-001  
RUN 03

NOISE SOURCE/SUBJECT:

OPERATION:

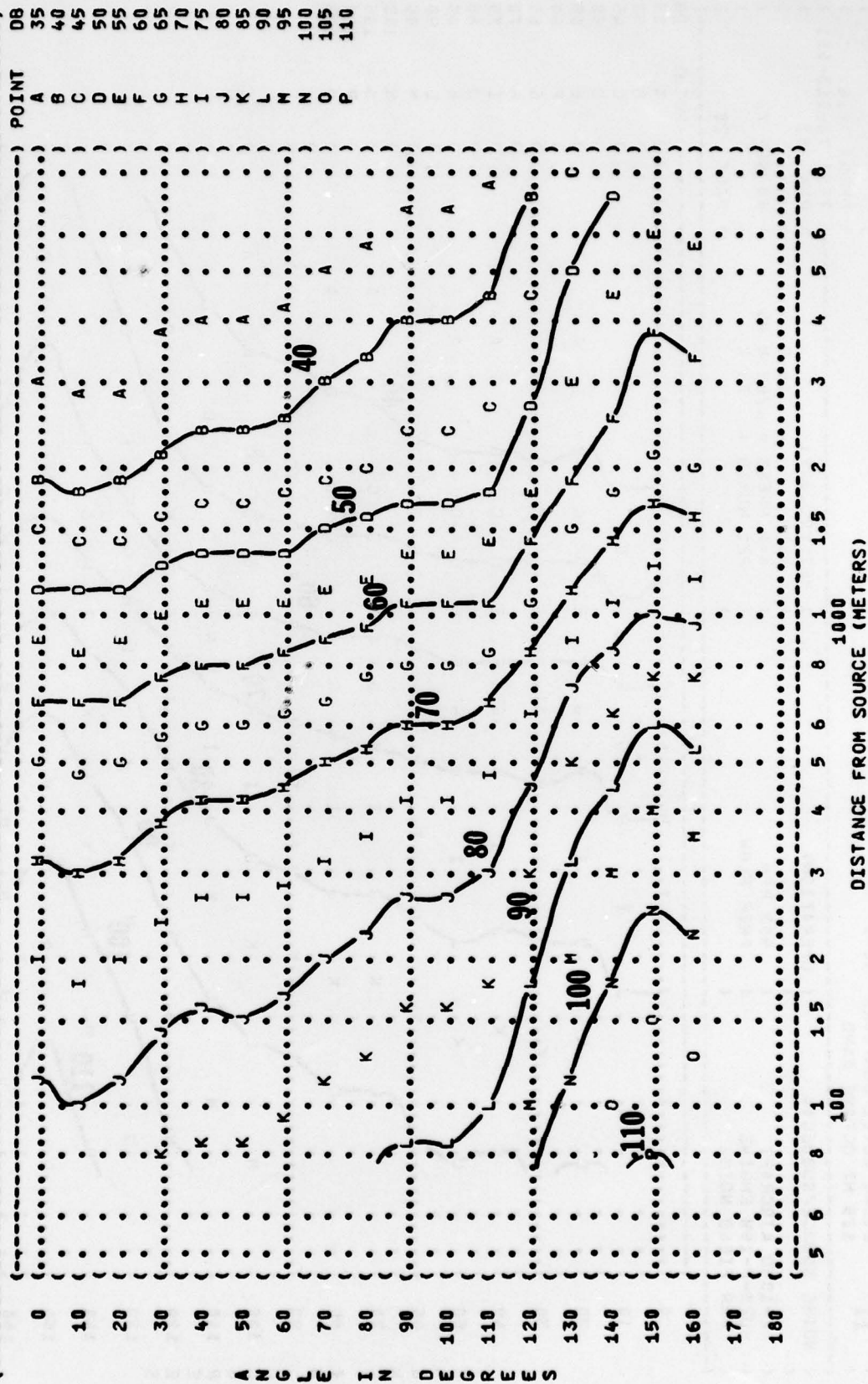
METEOROLOGY:

F-105D AIRCRAFT  
J75-P-19W ENGINE  
FAR FIELD NOISE

90% RPM  
FREE FLOW

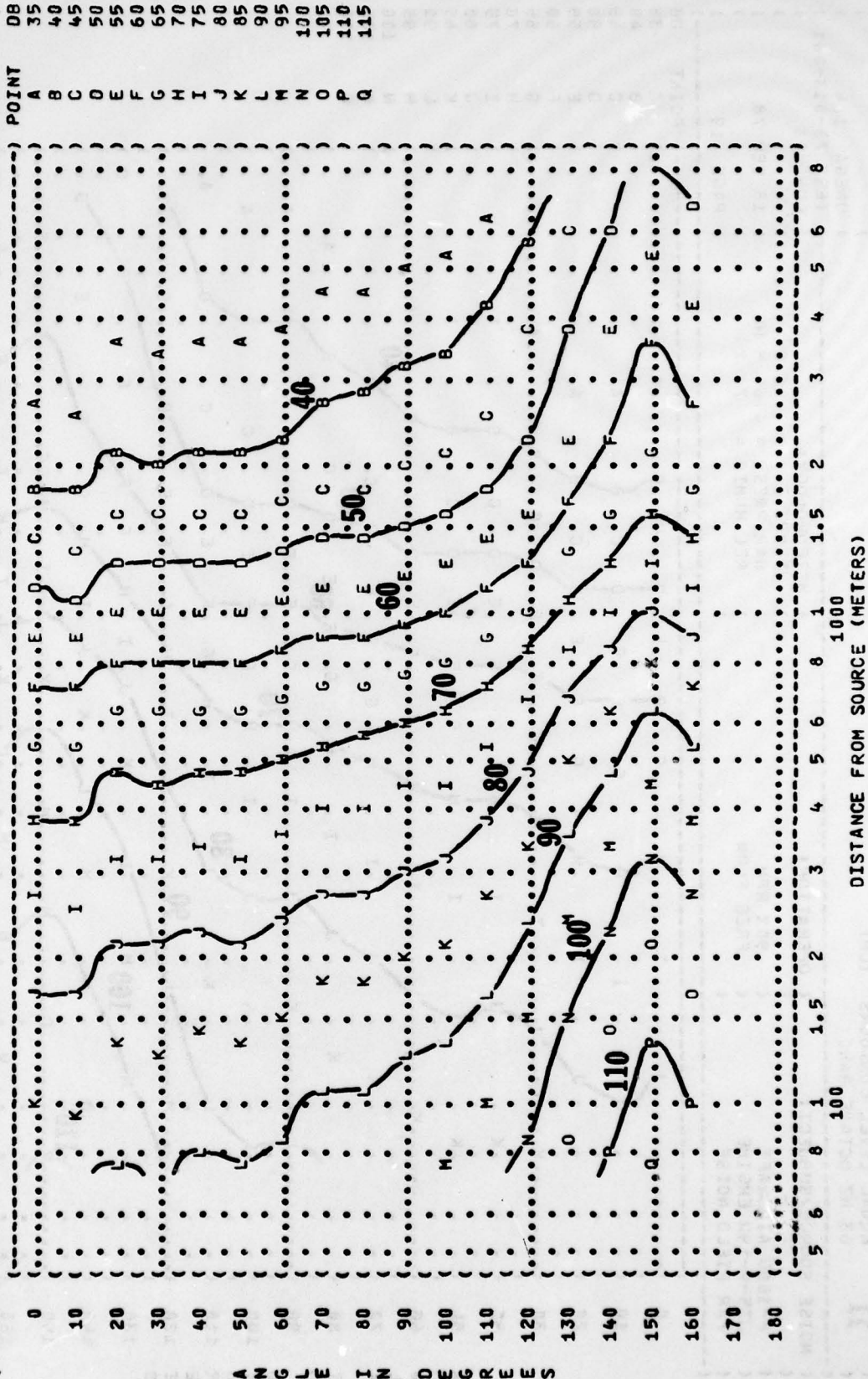
TEMP = 15 C  
BAR PRESS = .760 M HG  
REL HUMID = 70 %

PAGE 19



ANGLE IN DEGREES

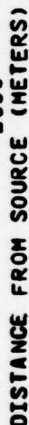
( FIGURE: SOUND PRESSURE LEVEL (SPL) )  
 ( 11 EQUAL LEVEL CONTOURS (DB) )  
 ( 125 HZ OCTAVE BAND )  
 ( NOISE SOURCE/SUBJECT: )  
 ( OPERATION: )  
 ( F-105D AIRCRAFT )  
 ( J75-P-19W ENGINE )  
 ( FAR FIELD NOISE )  
 ( METEOROLOGY: )  
 ( TEMP = 15 C )  
 ( BAR PRESS = .760 M HG )  
 ( REL HUMID = 70 % )  
 ( IDENTIFICATION: )  
 ( OMEGA 1.4 )  
 ( TEST 78-013-001 )  
 ( RUN 03 )  
 ( 18 SEP 78 )  
 ( PAGE 20 )



IDENTIFICATION:  
OMEGA 1.4  
TEST 76-013-00  
RUN 03

# METEOROLOGY

TEMP = 15 C  
BAR PRESS = .760 M HG  
REL HUMID = 70 %

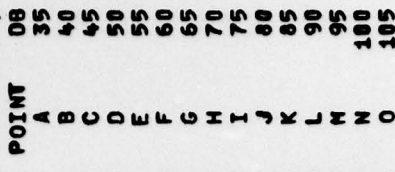


IDENTIFICATIONS:  
OMEGA 1.4

OMEGA 1.4  
TEST 78-013-001

## 1) METEOROLOGY:

TEMP = 15 C )  
BAR PRESS = .760 M HG ) 24 JAN 79  
REL HUMID = 70 % )  
PAGE 22 )



( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 11 EQUAL LEVEL CONTOURS (DB)  
 ( 1000 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: )  
 ( F-105D AIRCRAFT )  
 ( J75-P-19W ENGINE )  
 ( FAR FIELD NOISE )  
 ( OPERATION: )  
 ( 90% RPM )  
 ( FREE FLOW )  
 ( METEOROLOGY: )  
 ( TEMP = 15 C )  
 ( BAR PRESS = .760 M HG )  
 ( REL HUMID = 70 % )  
 ( IDENTIFICATION: )  
 ( OMEGA 1.4 )  
 ( TEST 78-013-001 )  
 ( RUN 03 )  
 ( 18 SEP 78 )  
 ( PAGE 23 )

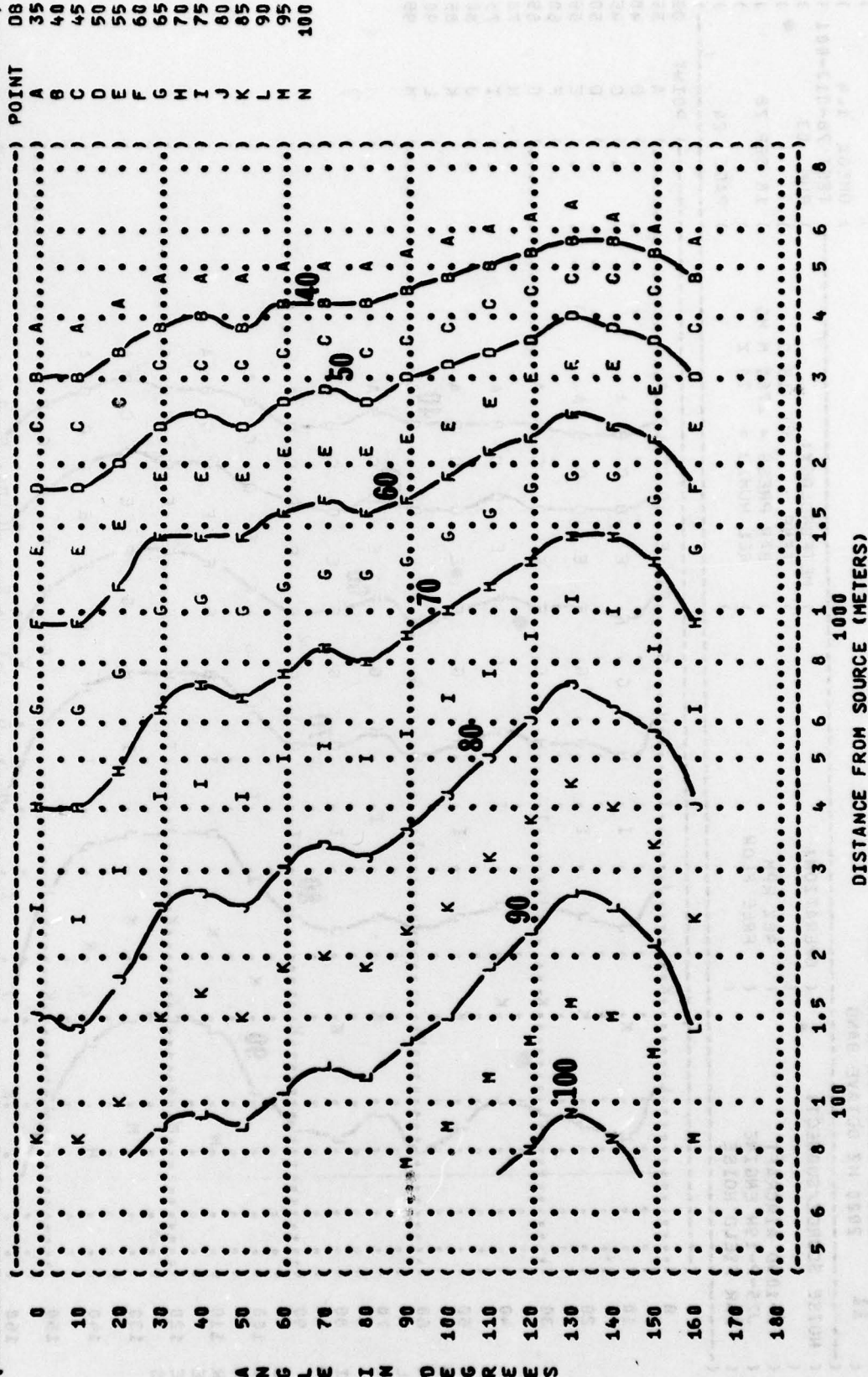


FIGURE: SOUND PRESSURE LEVEL (SPL)  
EQUAL LEVEL CONTOURS (DB)  
2000 HZ OCTAVE BAND

11

NOISE SOURCE/SUBJECT:

F-1050 AIRCRAFT  
J75-P-19M ENGINE  
FAR FIELD NOISE

OPERATION:

90% RPM  
FREE FLOW

METEOROLOGY:

TEMP = 15 C  
BAR PRESS = .760 M HG  
REL HUMID = 70 %

IDENTIFICATION:

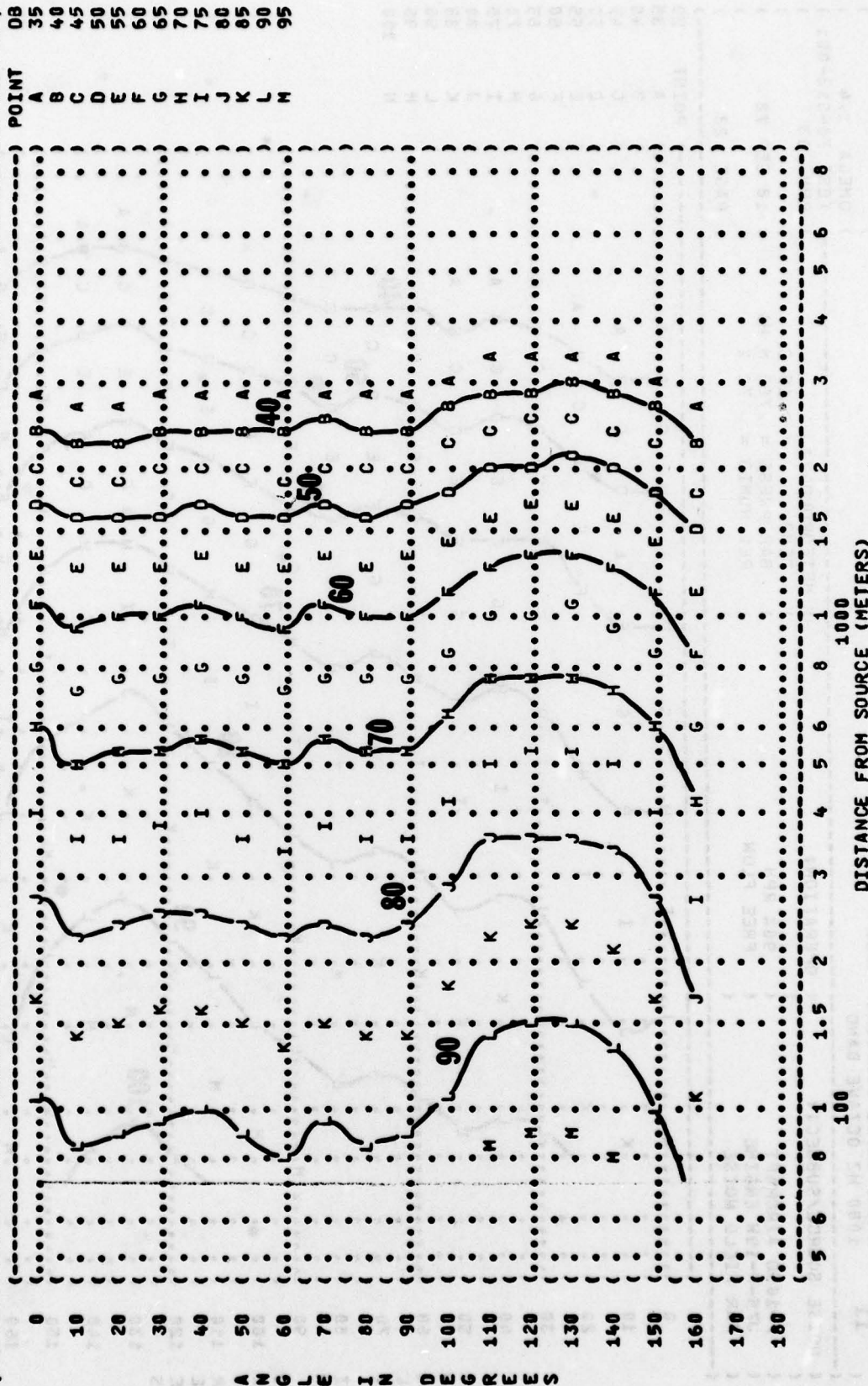
OMEGA 1.4

TEST 78-013-001

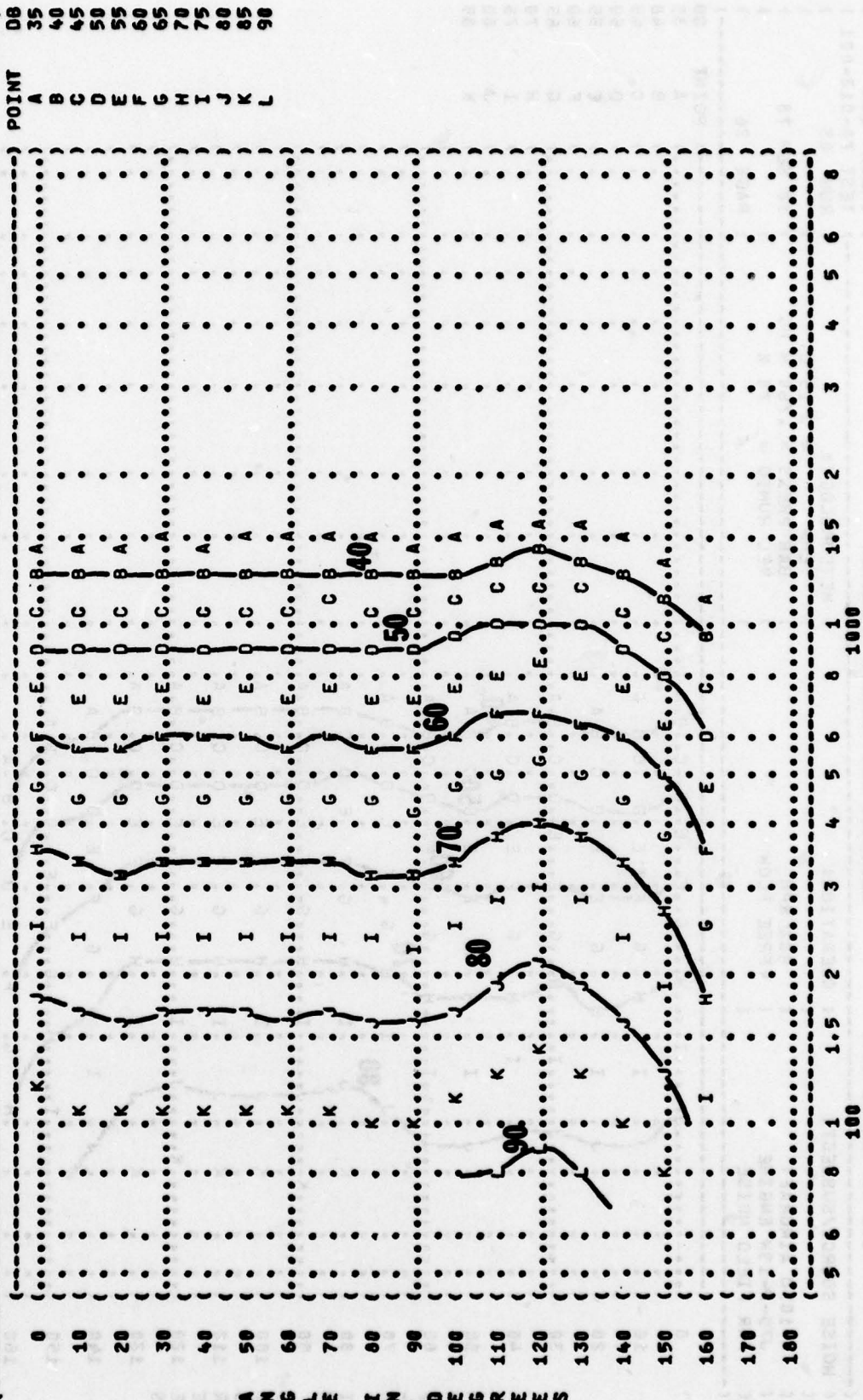
RUN 03

10 SEP 78

PAGE 24

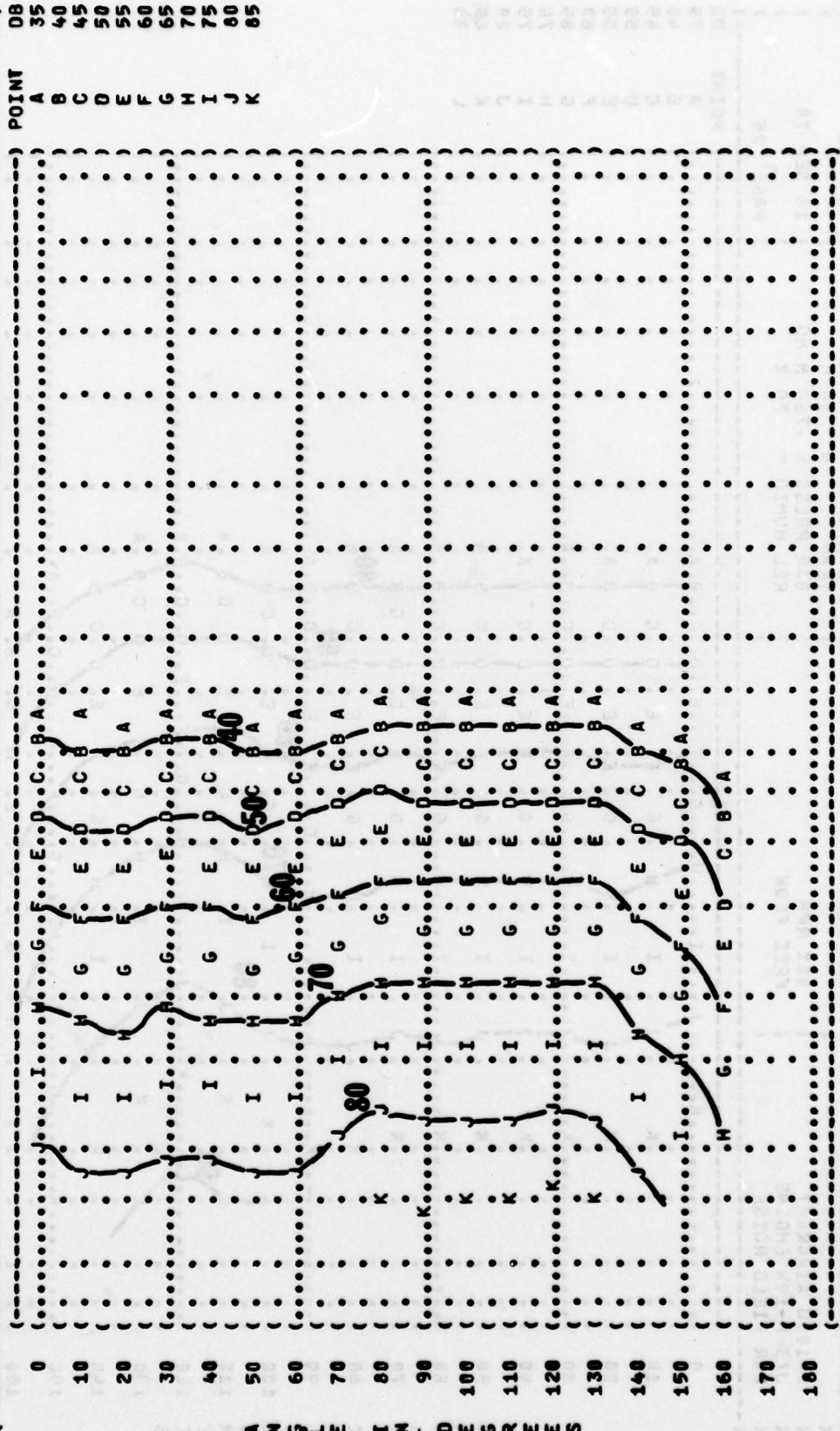


( ) FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( ) 11 EQUAL LEVEL CONTOURS (DB)  
 ( ) 4000 HZ OCTAVE BAND  
 ( ) NOISE SOURCE/SUBJECT: ( ) OPERATION:  
 ( ) F-1050 AIRCRAFT ( ) 90% RPM  
 ( ) J75-P-19W ENGINE ( ) FREE FLOW  
 ( ) FAR FIELD NOISE ( )  
 ( ) METEOROLOGY: ( )  
 ( ) TEMP = 15 C  
 ( ) BAR PRESS = .760 H HG  
 ( ) REL HUMID = 70 %  
 ( ) IDENTIFICATION: ( )  
 ( ) OMEGA 1.4  
 ( ) TEST 78-013-001  
 ( ) RUN 03  
 ( ) 10 SEP 78  
 ( ) PAGE 25



DISTANCE FROM SOURCE (METERS)

( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 11 EQUAL LEVEL CONTOURS (DB)  
 ( 8000 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( F-1050 AIRCRAFT ( 90% RPH  
 ( J75-P-19W ENGINE ( FREE FLOW  
 ( FAR FIELD NOISE ( )  
 ( ) METEOROLOGY: ( )  
 ( ) TEMP = 15 C  
 ( ) BAR PRESS = .760 M HG  
 ( ) REL HUMID = 70 %  
 ( ) PAGE 26  
 ( ) IDENTIFICATION: ( )  
 ( ) OMEGA 1.4  
 ( ) TEST 78-013-001  
 ( ) RUN 03



5 6 8 1 1.5 2 3 4 5 6 8 100  
 DISTANCE FROM SOURCE (METERS)

( ) IDENTIFICATION: ( )  
 ( )  
 ( ) OMEGA 1.4  
 ( ) TEST 70-013-001  
 ( ) RUN 04  
 ( )  
 ( ) METEOROLOGY: ( )  
 ( ) TEMP = 15 C  
 ( ) BAR PRESS = .760 M HG  
 ( ) REL HUMID = 70 %  
 ( )  
 ( ) OPERATION: ( )  
 ( ) MILITARY POWER  
 ( ) FREE FLOW  
 ( )  
 ( ) NOISE SOURCE/SUBJECT: ( )  
 ( ) F-105D AIRCRAFT  
 ( ) J75-P-19W ENGINE  
 ( ) FAR FIELD NOISE

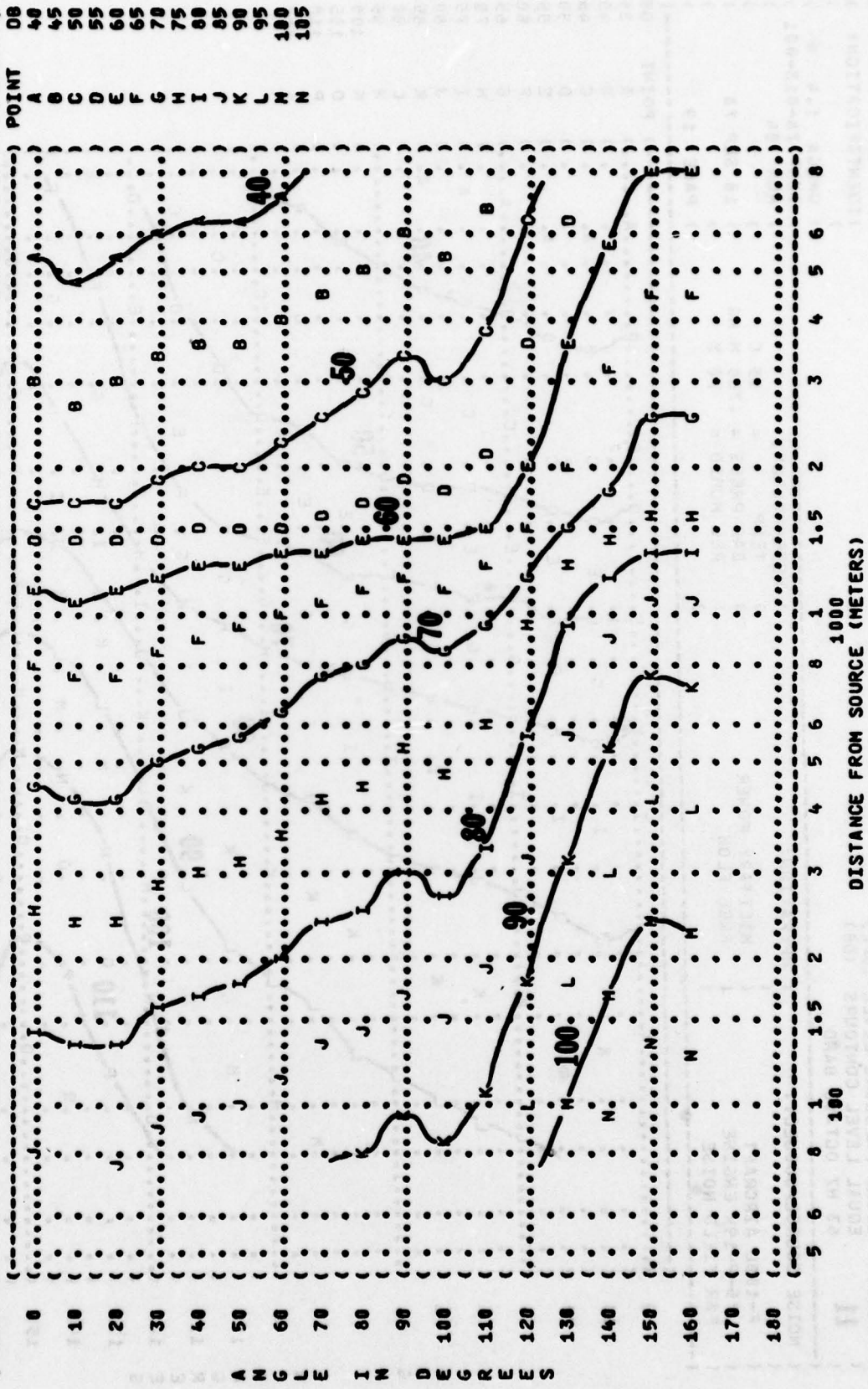
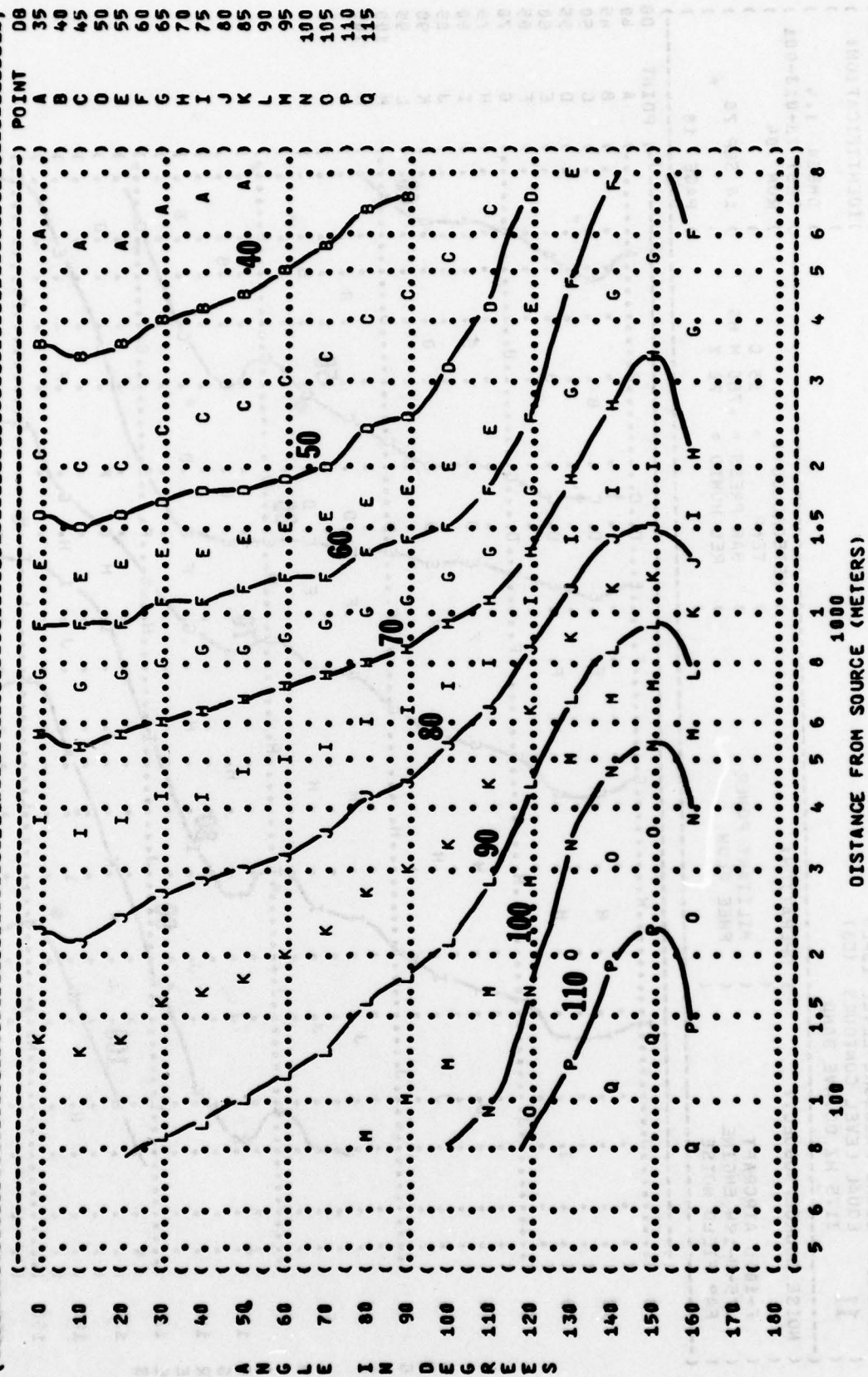


FIGURE: SOUND PRESSURE LEVEL (SPL)  
 11 EQUAL LEVEL CONTOURS (DB)  
 63 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT: ( OPERATION: ) METEOROLOGY: )  
 ( F-105D AIRCRAFT ( MILITARY POWER ) TEMP = 15 C )  
 ( J75-P-19W ENGINE ( FREE FLOW ) BAR PRESS = .760 M HG )  
 ( FAR FIELD NOISE ( ) REL HUMID = 70 % )  
 ( ) 18 SEP 78 )  
 ( ) PAGE 19 )

IDENTIFICATION: )  
 ) OMEGA 1.4  
 ) TEST 78-013-001  
 ) RUN 04



IDENTIFICATION:  
OMEGA 1.4  
TEST 78-013-00

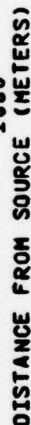
**125 HZ OCTAVE BAND**

( OPERATIONS:  
(  
( MILITARY  
( FREE FLO  
(

**ERATION:**  
**MILITARY POWER**  
**FREE FLOW**

) METEOROLOGY:  
 ) TEMP  
 ) BAR PRESS  
 ) REL HUMID

RUN 04  
18 SEP 78  
PAGE 20



IDENTIFICATION:  
OMEGA 1.4

**OMEGA 1.4**

**OMEGA 1.4**

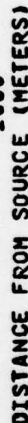
## 1) METEOROLOGY:

**04 RUN**

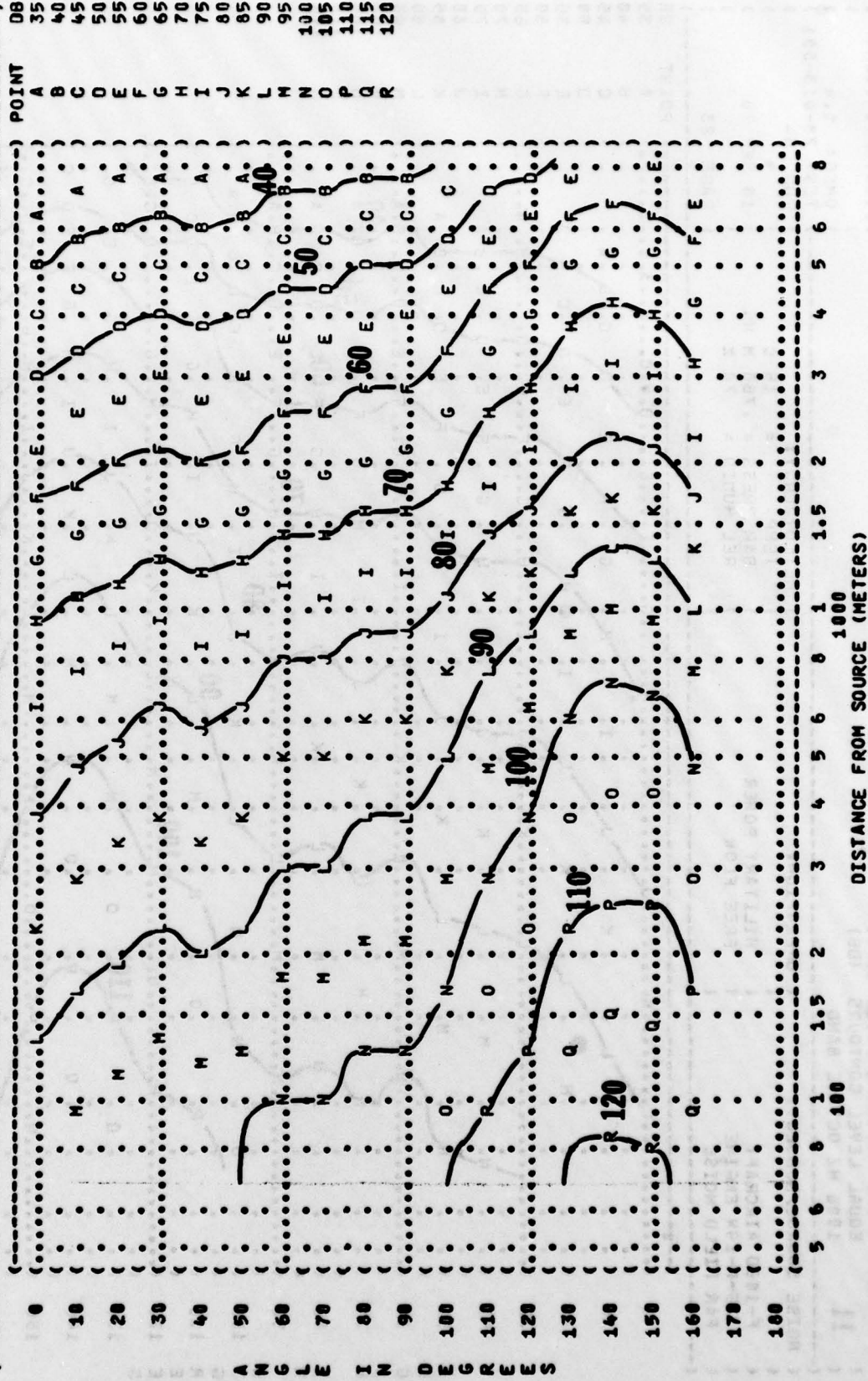
**MILITARY POWER  
FREE FLOW**

BAR PRESS = .760 M HG  
REL HUMID = 70 %

**PAGE 21**



( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 11 EQUAL LEVEL CONTOURS (DB)  
 ( 500 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( F-105 AIRCRAFT ( MILITARY POWER  
 ( J75-P-19W ENGINE ( FREE FLOW  
 ( FAR FIELD NOISE ( )  
 ( ) METEOROLOGY:  
 ( ) TEMP = 15 C  
 ( ) BAR PRESS = .760 M HG  
 ( ) REL HUMID = 70 %  
 ( ) 10 SEP 78  
 ( ) PAGE 22  
 ( ) IDENTIFICATION:  
 ( ) OMEGA 1.4  
 ( ) TEST 78-013-001  
 ( ) RUN 04



( FIGURE 1 SOUND PRESSURE LEVEL (SPL)  
 ( EQUAL LEVEL CONTOURS (DB)  
 ( 11 1000 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT ( OPERATION:  
 ( F-105D AIRCRAFT ( MILITARY POWER  
 ( J75-P-19N ENGINE ( FREE FLOW  
 ( FAR FIELD NOISE (

) IDENTIFICATION:  
 ) OMEGA 1.4  
 ) TEST 78-013-001  
 ) RUN 04  
 )  
 ) METEOROLOGY:  
 ) TEMP = 15 C  
 ) BAR PRESS = .760 M HG  
 ) REL HUMID = 70 %  
 )  
 ) PAGE 23

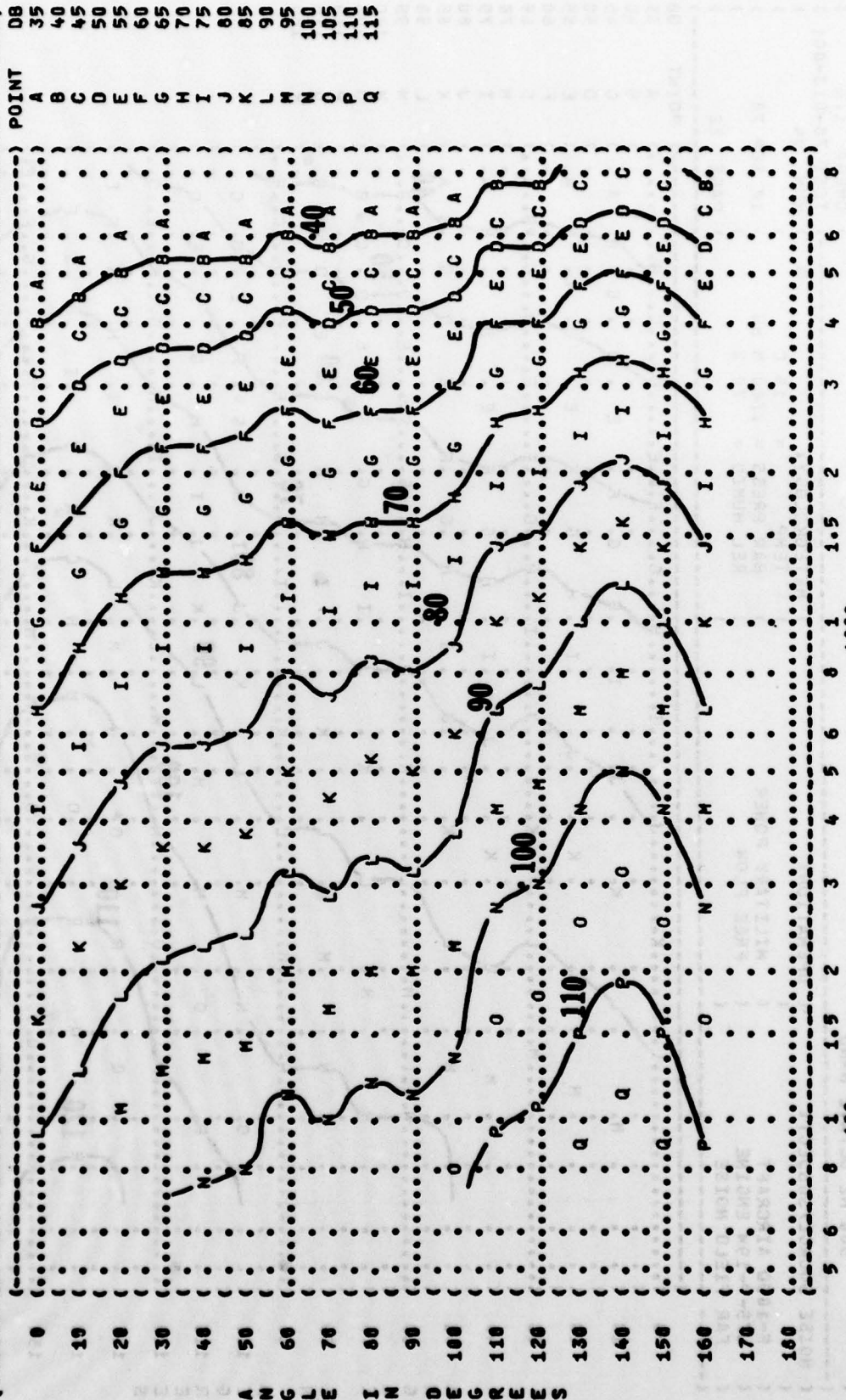


FIGURE: SOUND PRESSURE LEVEL (SPL)  
EQUAL LEVEL CONTOURS (DB)  
2000 HZ OCTAVE BAND

11

NOISE SOURCE/SUBJECT:

OPERATION:

METEOROLOGY:

IDENTIFICATION:

OMEGA 1.4

TEST 78-013-001

RUN 04

TEMP = 15 C

BAR PRESS = .760 M HG

REL HUMID = 70 %

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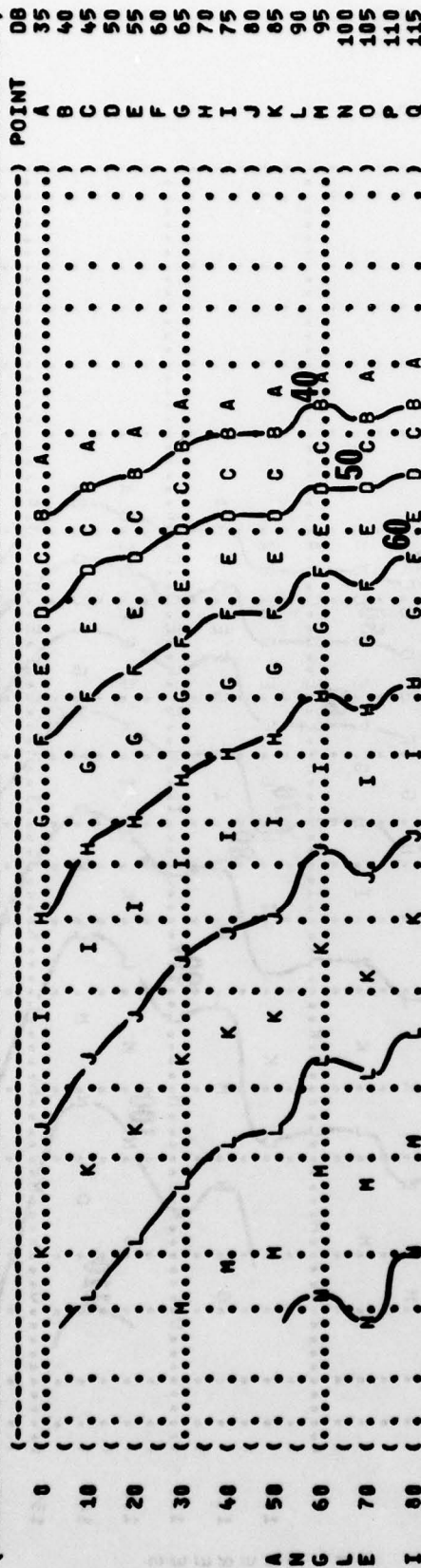
F-105D AIRCRAFT

J75-P-19W ENGINE

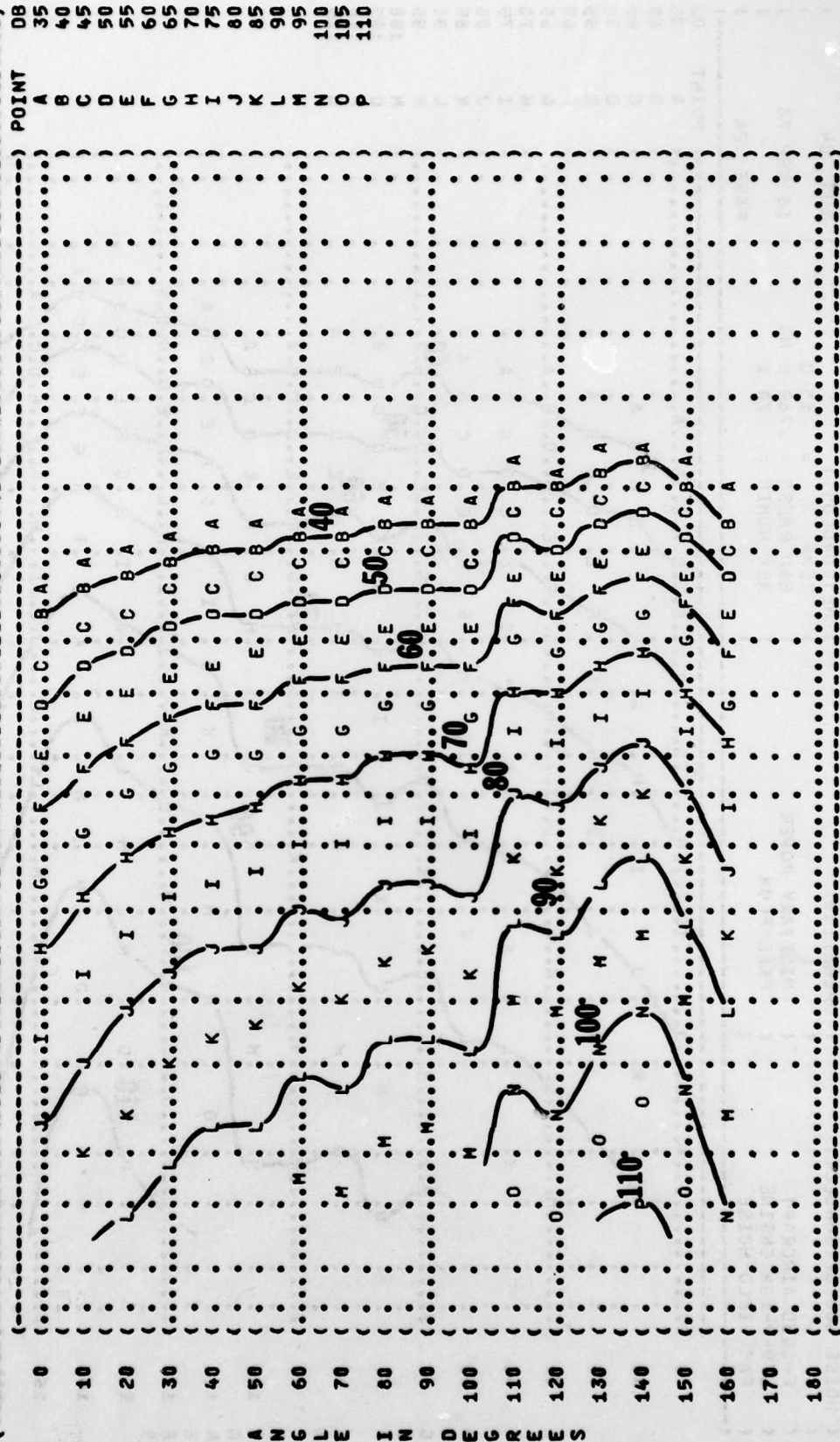
FAR FIELD NOISE

MILITARY POWER

FREE FLOW



( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 11 EQUAL LEVEL CONTOURS (DB)  
 ( 4000 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( F-1050 AIRCRAFT ( MILITARY POWER  
 ( J75-P-19W ENGINE ( FREE FLOW  
 ( FAR FIELD NOISE ( )  
 ( ) METEOROLOGY:  
 ( ) TEMP = 15 C  
 ( ) BAR PRESS = .760 M HG  
 ( ) REL HUMID = 70 %  
 ( ) IDENTIFICATION:  
 ( ) OMEGA 1.4  
 ( ) TEST 78-013-001  
 ( ) RUN 04  
 ( ) 18 SEP 78  
 ( ) PAGE 25



**FIGURE 11** SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 8000 HZ OCTAVE BAND

11

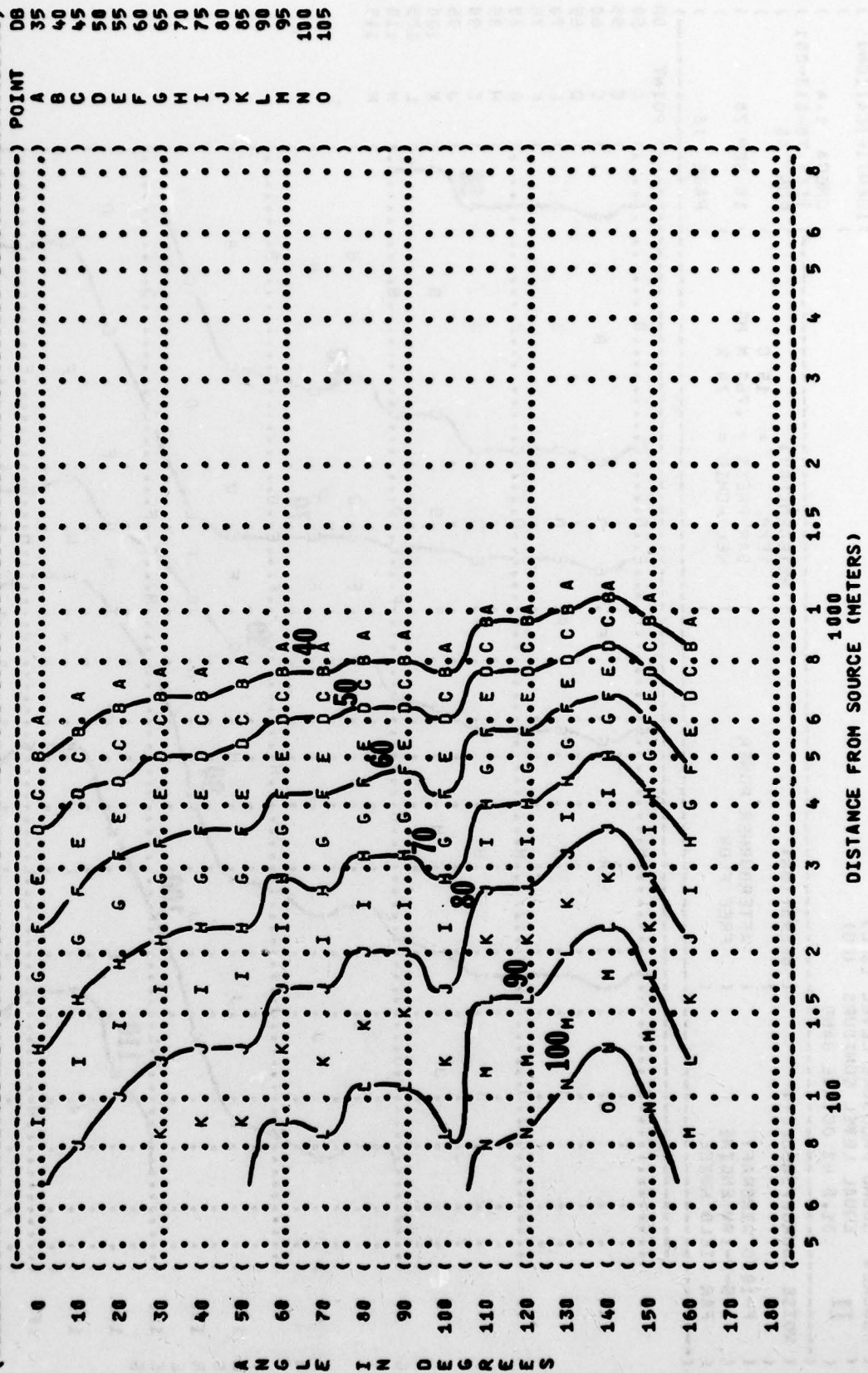
FIGURE: SOUND PRESSURE LEVEL {SPL}  
EQUAL LEVEL CONTOURS (DB)  
11 8000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT: ( OPERATION: ) IDENTIFICATION:  
OMEGA 1.4  
TEST 78-013-00  
RUN 04

**NOISE SOURCE/SUBJECT:** ( OPERATION:

F-1050 AIRCRAFT	(	MILITARY POWER
J75-P-19W ENGINE	(	FREE FLOW
FAR FIELD NOISE	(	

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**FIGURE: SOUND PRESSURE LEVEL {SPL}  
EQUAL LEVEL CONTOURS (DB)  
11 31.5 HZ OCTAVE BAND**

### IDENTIFICATION:

**OMEGA 1.4**

TEST 78-013-001

**RUN 05**

•

18 SEP 78

## 1) METEOROLOGY:

TEMP = 15 C

BAR PRESS = .760 M HG

REL HUMID = 70 %

**( OPERATION:**

100

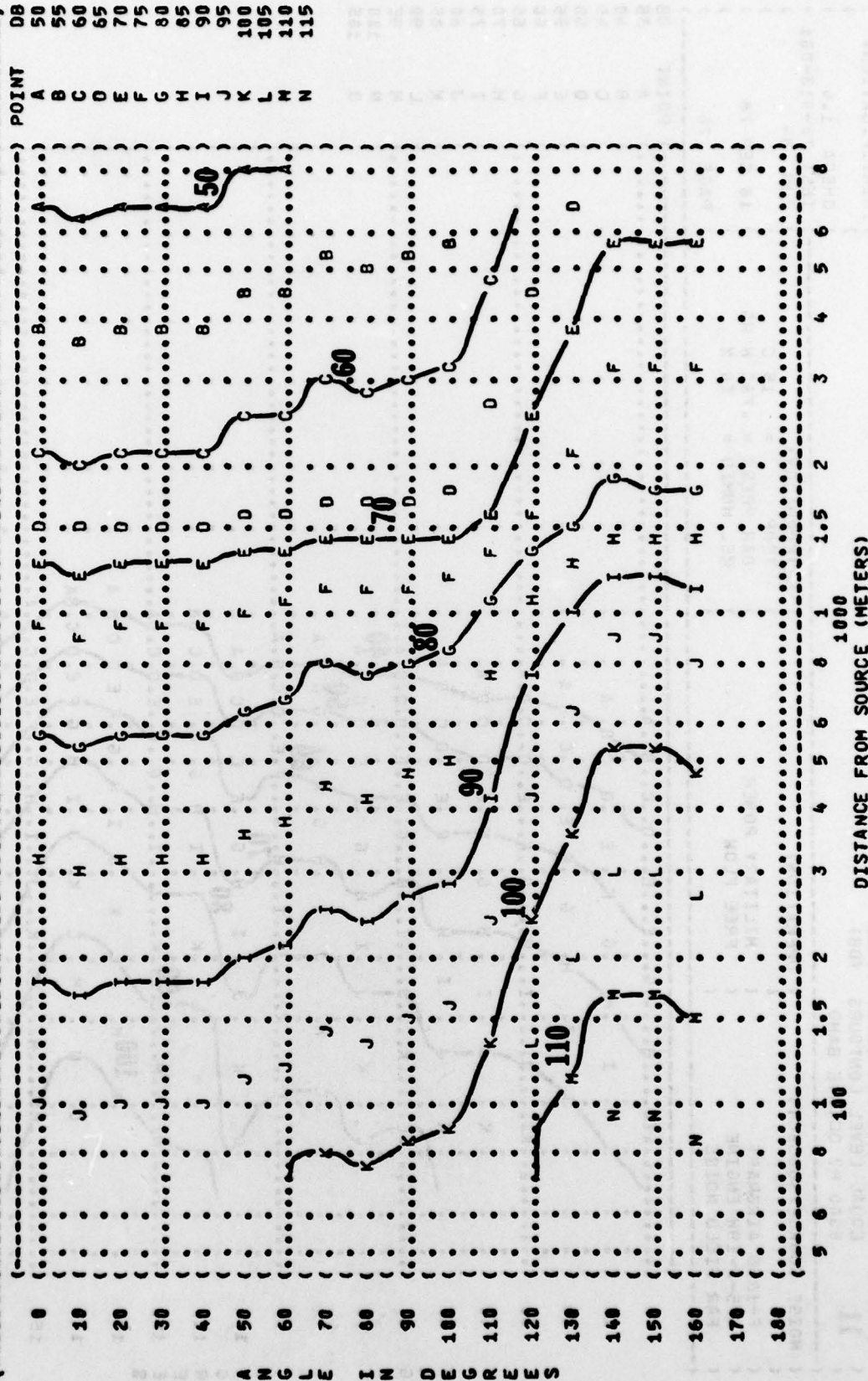
## AFTERBURN

NOISE SOURCE/SUBJECT:

[illegible]

## F-1050 AIRCRAFT

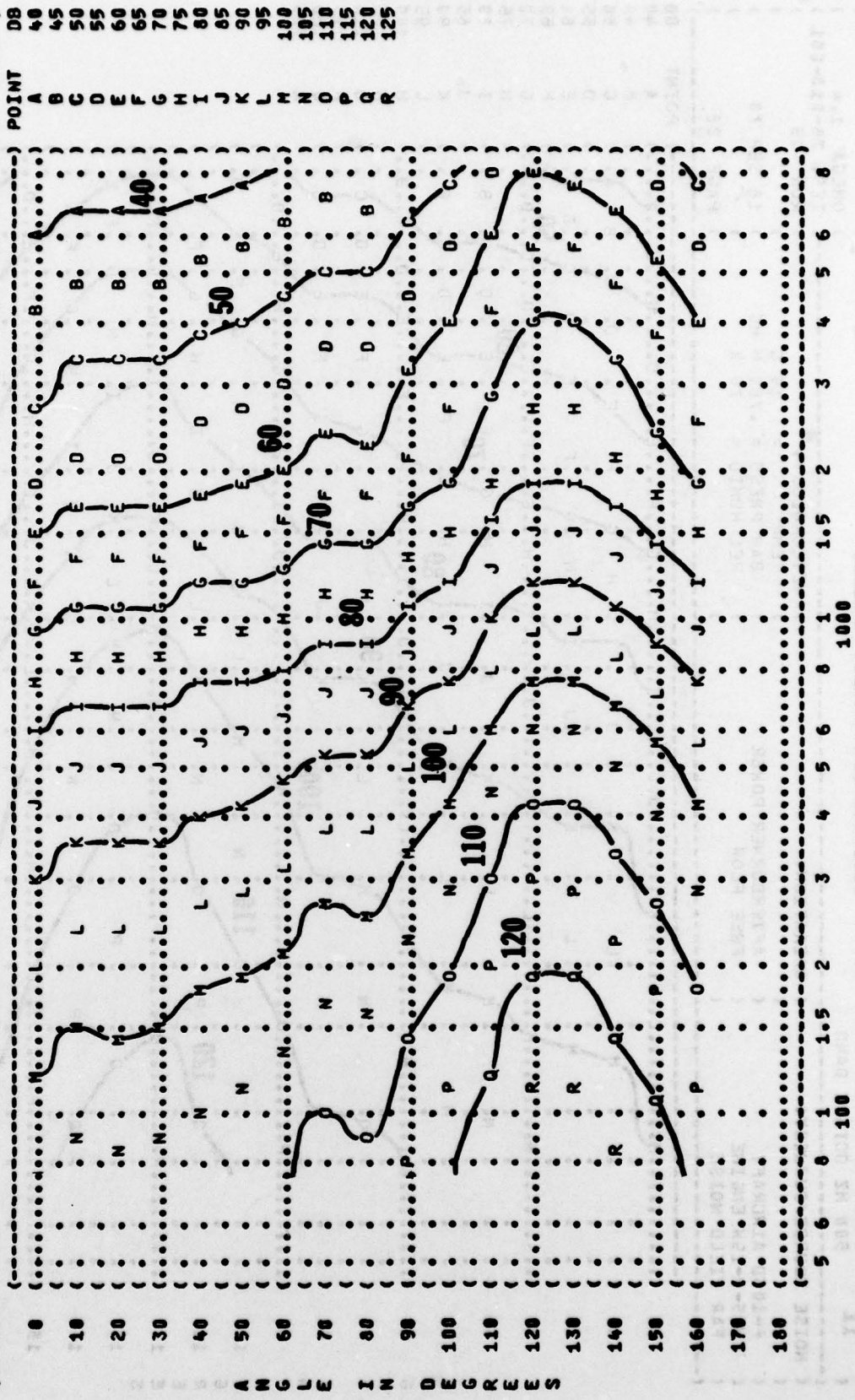
**J75-P-19W ENGINE**







( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 11 EQUAL LEVEL CONTOURS (DB)  
 ( 250 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( F-105D AIRCRAFT ( AFTERBURNER POWER  
 ( J75-P-19W ENGINE ( FREE FLOW  
 ( FAR FIELD NOISE ( )  
 ( ) METEOROLOGY: ( )  
 ( ) TEMP = 15 C  
 ( ) BAR PRESS = .760 M HG  
 ( ) REL HUMID = 70 %  
 ( ) PAGE 21  
 ( IDENTIFICATION: ( )  
 ( ) OMEGA 1.4  
 ( ) TEST 78-013-001  
 ( ) RUN 05  
 ( ) 16 SEP 78  
 ( )

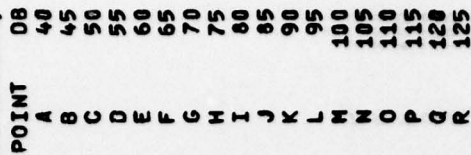


IDENTIFICATION: )  
OMEGA 1.4 )  
TEST 78-013-001 )

**METEOROLOGY:**

TEMP = 15 C  
BAR PRESS = .760 M HG  
REL HUMID = 70 %

**PAGE 22**

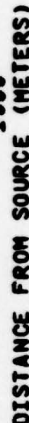


IDENTIFICATION:  
OMEGA 1.4  
TEST 78-013-001

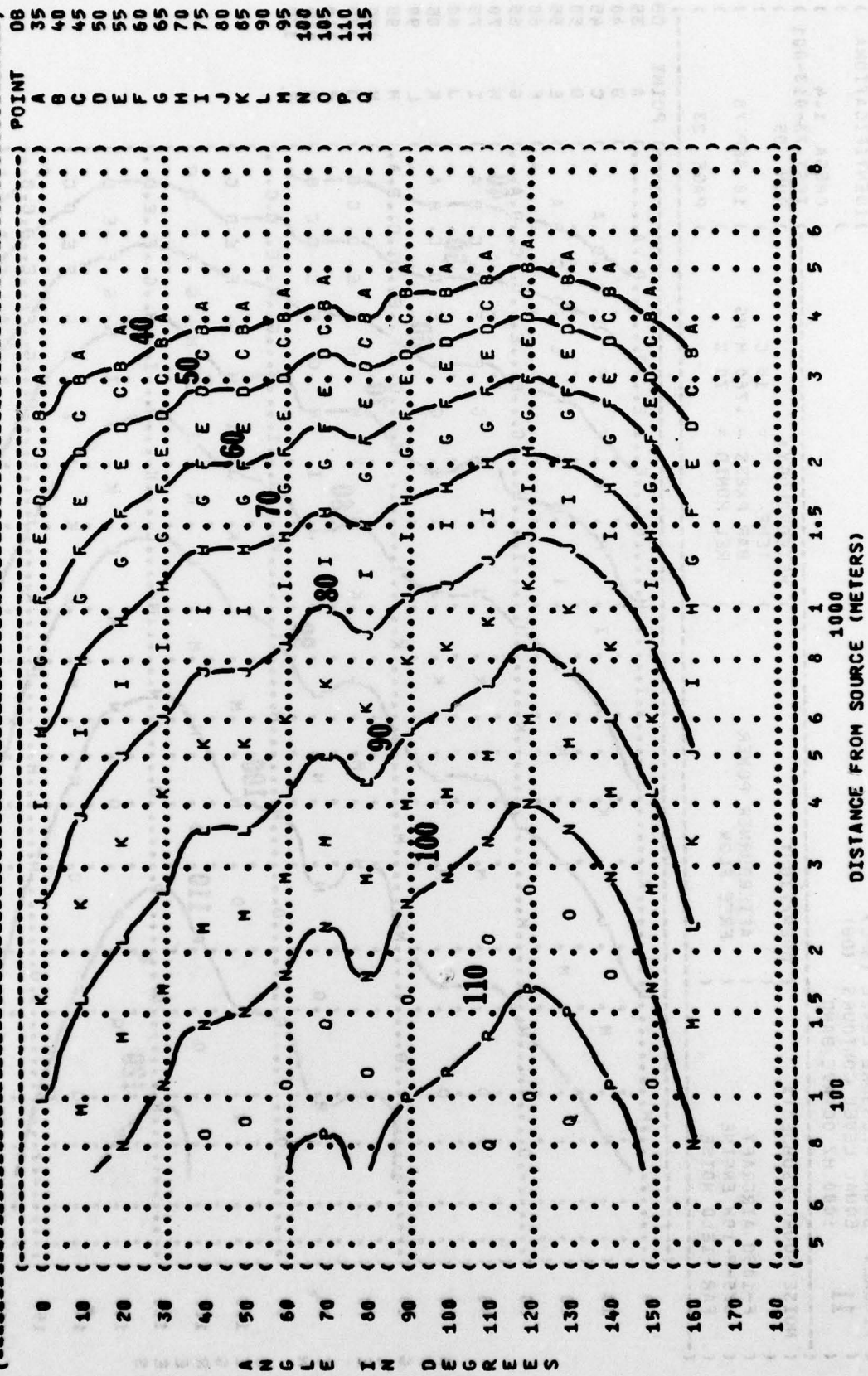
## METEOROLOGY:

BAR PRESS = .760 M HG  
REL HUMID = 70 %

) PAGE 23



IDENTIFICATION:  
 OMEGA 1.4  
 TEST 78-013-001  
 RUN 05  
 18 SEP 78  
 PAGE 24  
 METEOROLOGY:  
 TEMP = 15 C  
 BAR PRESS = .760 M HG  
 REL HUMID = 70 %  
 OPERATION:  
 AFTERBURNER POWER  
 FREE FLOW  
 NOISE SOURCE/SUBJECT:  
 F-105D AIRCRAFT  
 J75-P-19H ENGINE  
 FAR FIELD NOISE

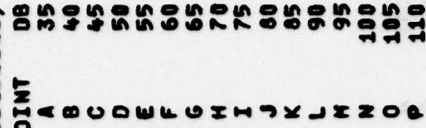


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IDENTIFICATION: )
)
) OMEGA 1.4 )
) TEST 76-013-001 )
) RUN 05 )
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## 1) METEOROLOGY:

AFTERBURNER POWER  
FREE FLOW

) TEMP = 15 C  
) BAR PRESS = .760 M HG  
) REL HUMID = 70 %  
)



( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 11 EQUAL LEVEL CONTOURS (DB)  
 ( 6000 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( ( F-105D AIRCRAFT  
 ( ( J75-P-19W ENGINE  
 ( ( FAR FIELD NOISE  
 ( ( AFTERBURNER POWER  
 ( ( FREE FLOW  
 ( ( METEOROLOGY:  
 ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 78-013-001  
 ( RUN 05  
 ( 18 SEP 78  
 ( PAGE 26

